

June 1908 missing
cannot be supplied.

THE FAR EASTERN REVIEW

COMMERCE • ENGINEERING • FINANCE

VOL. V.

MANILA, P. I., SHANGHAI, AND YOKOHAMA, JULY, 1908

No. 2.

March 9-1918
14. cont



The Hon. NEWTON W. GILBERT,
Member of the Philippine Commission

Newton W. Gilbert resigned his position as a member of congress representing a district in Indiana to accept the appointment as judge of the court of first instance of the Philippines, in 1906. He was among the names sent to the senate to fill the vacancies on the Philippine Commission. The position does not carry a portfolio.

OF THE
CITY OF BOSTON

333/3

THE FAR EASTERN REVIEW

GEO. BRONSON REA, M. E.

PUBLISHER AND EDITOR

COMMERCE :: ENGINEERING :: FINANCE

A Monthly Review of Far Eastern Trade, Finance and Engineering, Dedicated to the Industrial Development and Advancement of Trade in the Philippines and Far Eastern Countries

PUBLICATION OFFICE:

MANILA, PHILIPPINE ISLANDS

CHINA OFFICE

KELLY & WALSH, Ltd.

Shanghai

UNITED STATES GENERAL OFFICE:

91-93 Wall Street, New York City

GREAT BRITAIN:

PROBSTHAIN & CO.

14 Bury Street British Museum, London, W. C.

SUBSCRIPTION AGENTS:

HONGKONG..... KELLY & WALSH, LTD.
SINGAPORE..... " " " "
YOKOHAMA..... " " " "
SHANGHAI..... " " " "
TIENTSIN..... TIENTSIN PRESS, LTD.
WASHINGTON, D. C..... BRENTANO'S.

SUBSCRIPTION RATES: Philippines, United States, Canada, and Mexico, \$2.50 U. S. C. per year. To all other countries in the Postal Union, \$3.00 per year. Single copies 25 cents, U. S. C.

ADVERTISING RATES will be mailed on application.

Communications pertaining to the Editorial Department should be addressed to THE EDITOR.

ENTERED AT POST OFFICE, MANILA, P. I., AS SECOND CLASS MATTER.

MANILA, SHANGHAI AND YOKOHAMA, JULY, 1908

CONTENTS

	PAGE.
EDITORIALS.....	35
Obituary.....	36
Financial and Economic Conditions in Japan.....	37
Kuala Lumpur Electric Power.....	38
Coal Fields of Kyushu.....	39
Japan's Coal Output.....	45
Philippine Free Trade Petition.....	46
Mining in Java.....	46
Development of Shipbuilding in Japan.....	46
Messrs. Whiteaway, Laidlaw & Co., Limited.....	48
Peking Waterworks.....	48
Mindanao Lumber Trade.....	48
Peking-Kalgan Railway.....	49
Taotai Jeme Tien-Yow, M. Inst. M. E.....	50
New Philippine Mining Co.....	51
New Publications.....	51
Rubber Exhibition.....	51
Hangyang Iron & Steel Works' Big Steel Contract.....	51
Far Eastern Association of Tropical Medicine.....	52
Bids Opened.....	52
Taikoo Dockyard & Engineering Co.....	52
Rival for Macao.....	52
Grand Exhibition of Japan.....	53
Solving Agricultural Problems in Horseless Areas.....	54
American Hardware Co.'s New Building.....	55
Personal.....	55
Aroroy Mining District.....	56
Far Eastern Mine Outputs.....	56
Batan Coal Fields.....	56
Insular Coal Co.'s Railway.....	56
Far Eastern Company Reports.....	57
Far Eastern Engineering, Construction, Commercial and Financial News.....	59
America-Manchuria S. S. Line.....	61
London Metal Market.....	61
New York Metal Market.....	61
Hemp Statistics.....	61
Far Eastern Stocks and Quotations.....	62
Alphabetical List of Advertisers.....	
Advertising Section Page 38.....	

THE IMPERIAL CHINESE TELEGRAPHS

The movement on the part of the Peking government to nationalize the telegraph system throughout the empire is the subject of much comment, some adverse, not so much against the desire of the government to control, extend and perfect the system, as to the methods employed. The other objection comes from the mercantile shareholders in the present Imperial Telegraph Administration who have been offered a smaller price for the shares, and in an apparently arbitrary manner, by the Chinese government, than the market price maintained previous to the nationalization agitation.

The main protest comes from the shareholders. According to the *China Gazette*, the meeting at Shanghai where the matter was discussed by Sheng Kung-Pao representing the Board of Posts and Communications, with a number of the leading shareholders, was far from congenial as the following report indicates:

"Sheng Kung-pao, speaking on behalf of the Board of Posts and Communications, stated that in foreign countries the government frequently nationalises railways and telegraphs. Mr. Hu replied that in foreign countries the Government invariably considers the wishes of the private shareholders, and the shares are always paid for according to the market value, instead of as at present the Board naming its own price, without consulting the wishes of the owners.

"Sheng Kung-pao:—The object of the conference is to discuss the matter with you, gentlemen, so that the Board may be acquainted as to your wishes.

"Mr. Hu Erh-mei:—Is that true that the Board is offering to buy the shares at \$170?

"Sheng Kung-pao:—That is the market value, is it not?

"Mr. Hu Erh-mei:—The Government can compel the people to sell their shares at any price; it has the power to do so, but such a policy is quite inconsistent with the decided policy of the Imperial Government when the Throne has repeatedly ordered that all commercial enterprises and undertakings are to be effectively protected and the Government is also anxious that the capitalists should invest their money in great industrial and commercial schemes. The present policy pursued by the Board will tend to discourage private capitalists from investing their money in such undertakings as the telegraphs.

"Sheng Kung-pao:—But the Board is offering to buy the shares at their market value.

"Mr. Hu Erh-mei:—\$170 is not the market value. The shares, together with the dividend and interest, should be valued at \$300 each. Last year telegraph shares were bought in the market for \$200 each, and the present fall in value is the result of the consternation caused by the Board wanting to buy these shares and at the same time paying only \$170.

"Sheng Kung-pao:—Who were the parties who sold and bought these shares at \$200? (The names of the parties in that transaction were given.)

"Mr. Su Pao-sun:—This year's dividend will be \$20 a share, so the true value of the shares should be \$300; even with the latter price the investment is not a bad one, as it gives 20 per cent. interest.

"Mr. Hu Erh-mei:—Now the Imperial Chinese Telegraphs make money. Should the reverse happen and the shares be worthless, would or would not the Board buy them at \$100 a share which is its original value,

"Sheng Kung-pao smiled and did not reply. He added that he would write to the Board communicating with the latter the conversation that took place at the conference."

The object of this nationalization of the Chinese telegraphs is explained by the correspondent of the *North China Daily News* as follows:

"1. To convert the administration into a Chinese Government department.

"2. To increase its capital to at least Tls. 5,000,000.

"3. To repair thoroughly all cable and land lines where necessary.

"4. To construct new lines in Manchuria, Mongolia and Tibet and also in some places in China proper for the general improvement of communications."

In connection with the representations made to the International Telegraph Conference held at Lisbon, made by China respecting the infringements of her national rights in Manchuria and elsewhere, Dr. Morrison offered the following scathing criticism of the system in China which throws some light on the subject:

"While China undoubtedly has a grievance, the knowledge of the present condition of her telegraph administration makes it improbable that the statement will receive a favorable hearing. Her inland telegraphs are, perhaps, the worst in the world.

"In the proper sense of the words there is no Imperial telegraph system. The telegraphs belong to a private company in which the Imperial Government has a half share. There is no proper control and no central administration.

"There are separate provincial organizations under separate Viceroys, and the service is deteriorating instead of improving, especially since the Fokienese Chen-pi was appointed Minister of Communications, for he treats the office as a means of finding berths for his fellow-provincials.

"Under capable administration, with a uniform charge similar to that in other countries, the service might become a great national revenue-producing department, increasing trade and commerce, consolidating the nation, breaking down provincial barriers, simplifying money exchange. Seven highly competent Danes are the only foreigners employed on the telegraphs throughout the Empire.

"At present the charges are prohibitive, preventing the use of telegraphs for private or commercial purposes. For example, recently I visited two important cities with a quarter of a million inhabitants each. Yet the number of private messages sent from each average only twenty a day."

As predicted by Dr. Morrison, the international conference turned down the petition of the Chinese government for the reason that although Taotai Chou Wan-peng, the Chinese delegate, presented a statement to the conference concerning the establishment of foreign offices in Manchuria in infringement of China's rights, the representatives of the different powers expressed themselves against giving the matter a favorable hearing unless China removed the existing irregularities and excessive charges for the telegraph service. With his report, the Chinese delegate urges prompt reform.

Commenting further on this subject the *North China Daily News* says:

"Between complaints abroad and complaints at home China has abundant excuse for drastic action, even at the expense of the apparent injustice of compulsory acquisition of the Telegraph Company's shares from their present holders. There is no doubt that the service might become a valuable asset to the nation both for revenue and consolidation; while its reversion into the hands of the supreme power would be a powerful factor in that policy of centralization which is now so clearly Peking's ideal.

"It is clear that the shareholders do not intend to relinquish their property without a struggle. Urgent protests have been sent to Peking from the Shanghai native merchants involved; and even the announcement that the Ministry of Posts and Communications is prepared to pay \$170 a share does not mollify them. They prefer the present investment for their money, which, with all its disadvantages, is admittedly remunerative. With some reason they ask where the necessary funds are to come from: and the answer given is, a foreign loan. But considering that such a loan would have to provide, according to the Government's present scheme, for all repairs now necessary; for the construction of new lines in Manchuria, Mongolia and Tibet and the improvement of others; for an increase of the department's capital to Tls. 5,000,000 and for the temporary losses consequent upon a reduction of the tariff by one half, it is not surprising if the

shareholders are sceptical as to the amount in hard cash that may remain for their own claims. What they not impossibly fear is that the shares may be taken from them at a number of years' purchase; worse still, that payment might be made contingently upon future profits. Here indeed the Government has to see that one portion of the community is not forced to suffer unduly for the benefits of the whole, and this as much for reasons of common sense, as of common justice. Peking, as usual, is divided on the question, the opponents of Government acquisition objecting that enforced purchase will destroy public confidence among those who have money to invest; while others suspect that the Minister of Posts and Communications, Cheng Pih, is actuated too much by motives of private interest for the good of the undertaking. On the other hand the leaders of the reform Party would appear to be in favor of Government control: and if the conversion is effected gradually for the avoidance of friction, there is no insuperable reason why it should not be made. Even in the countries where private enterprise has reached a far more advanced stage than in China, it has been found that Posts and Telegraphs are best left in Government's hands."

In all the history of the Chinese telegraph the greatest success attained in organization and direction was under foreign control and it would seem advisable at this time, when the government is undertaking the project of nationalization, that it should have the best experience available to direct the work and this can only be attained by securing the services of foreign experts, not only in the organization of this enterprise but in its operation until such time as the service has reached that state of efficiency under carefully trained Chinese experts, developed in the process, that will invite the confidence of the leading Chinese and foreign interests. The development of such a system as might compare favorably to the postal system originally organized under the direction of Sir Robert Hart, would reflect the highest possible credit to the Chinese government; even if a decade were exhausted in bringing it up to that standard it would be a remarkable achievement.

SEPTIC SEWAGE AND CONCRETE

In utilizing concrete in the construction of septic tanks special provision seems to be necessary to provide against the deteriorating action of the sewage and this has been made the subject of interesting and instructive comment by the *Engineering Record* in a recent issue.

That magazine says:

"Mr. W. S. MacHarg, of Chicago, when directing an excavation along one wall of a concrete septic tank, which had been in service between four and five years, found the concrete in that wall to be in such a badly weakened condition that the wall was collapsed by the pressure of the contents of the tank when the backfill against it had been removed. The concrete was well made with good cement when the tank was built and had shown no previous indications of deterioration. Mr. W. S. Shields, also of Chicago, under whose direction the tank was constructed, found recently that the concrete in two other septic tanks built under his supervision about five years ago in the South has evidenced recently very serious injury, which can scarcely be attributed to any other cause than the effects of the products of the action which occurs in the tanks. The upper 5 ft. of the walls of one of these tanks are above the ground level, and were perfectly tight during the first three years following the completion of the tank. About that time seepage through these walls began, and Mr. Shields found several considerable leaks through the concrete on a recent visit to the tank. The surface of the concrete bottom of a second tank in the same city, when that tank was recently cleaned, was also found to be loosened so it could be shoveled out like so much broken stone.

"The two latter tanks receive straight domestic sewage containing no trade wastes. The first tank mentioned was built to treat the domestic sewage of a large manufacturing

establishment, and receives practically no trade wastes from the shops of this establishment. Neither Mr. MacHarg nor Mr. Shields have undertaken to determine certainly whether the concrete in these three cases has been impaired by the action of the septic sewage, as it appears to have been. Both of them are, however, sufficiently convinced that some such action may be expected that they contemplate further investigations of concrete in other tanks, and in outfall sewers that have been in service long enough to show any results from the action of the septic sewage that may occur. While it is conjectural to state that septic sewage may seriously affect concrete, even though not for some years after the completion of a structure, detailed studies of this phase of the maintenance of sewage works will be fully justified. Should any detrimental results be shown to be caused by such action it may be necessary to use some other materials for structures subjected to the action, or some method of protecting the concrete from contact with the septic sewage."

There would seem to be sufficient reason for a series of experiments in regard to the action of sewage on concrete with a view to ascertaining the element responsible for the deteriorating effect, and for the purpose of providing against the possibility of injury to concrete construction in connection with sewage.

INCIDENTS INTERESTING IN FAR EASTERN RAILROADING

There is a seeming monotony in the operation of railways in Eastern Asia, or that is the way it strikes a Westerner, but there are times when the spectacular is presented in forms that make unusual experiences in Europe and America pale into insignificance in comparison. It must be remembered that the railroad is as yet a novelty in many sections in China and there is much local prejudice against it in sections newly invaded. In this connection the experience of a train crew on the Shanghai-Nanking Railway indicates that it is a difficult task to hurry the East and not at all easy to change the fixed purpose of an obstinate Chinaman in his own bailiwick. It is the story of how a Chinese, the bereaved family of a native of Lungtan who was killed by a train, held up the Shanghai Express and had to be dispersed with a force of soldiers before it was allowed to proceed. The following graphic account of the incident is from the *North China Daily News* of recent date:

"It appears that the slow train, which passes through Lungtan, between Chinkiang and Nanking, about 4.03 p. m. ran over and killed a young villager, who crossed the line in front of the engine. When the Shanghai express, which reaches the neighbourhood about two hours later, reached Lungtan the passengers were informed that they could travel no further, as the slow train had been held up. Mr. Dunstan, locomotive superintendent, and several other railway officials discussed the matter with the passengers, and one of the latter, who could speak Chinese, volunteered to go forward and parley with the angry villagers. Ten soldiers from Lungtan were taken up as an escort, and, proceeding cautiously, reached the scene of the disturbance about dusk. The soldiers and four or five of the foreign officials and passengers then disembarked, and walked to the head of the held-up train. There they found a young man of about sixteen, dead. His female relatives and members of his family had piled up straw, and were lying across the line, and a crowd of villagers, that was standing round, was backing the bereaved natives up. The father of the dead youth and his employer, as well as the tipao and elders of the villagers, were sought out and a long parley ensued. The villagers seemed not to know what they wanted; some demanded a thousand dollars; others wanted ten thousand. They were promised that they would be dealt with justly if they came on to Nanking, but they refused to credit this assurance, and were not even satisfied with Mr. Dunstan's card with an undertaking to that effect written on the back. They insisted that they must have money to purchase a coffin, and refused with scorn the

small sum of ready money that could be offered them. Seeing that further negotiations were fruitless, the order was given to clear the line, and this was done by the soldiers after a smart tussle. The soldiers were then drawn up on both sides of the line, and the slow train was cautiously dispatched on her way. The express followed after another scrimmage to clear the line, and then the villagers gave up the struggle and allowed a third train to pass without more ado."

In Siam the railroader finds himself confronted occasionally with another obstacle to peaceful and secure pursuit of his avocation. When some energetic and frisky young elephant desires to register a protest against the modern order of things down in Siam and the intrusion upon his jungle home by the contemptuous iron monster, he proceeds to waylay the first string of coaches and go juramentado with the moving objective. A description of the latest break in the monotony of the region about 43 kilometers from Bangkok appears in the *Bangkok Times*. It resulted in the death of the local jumbo and the passing out of two of the train crew, while one locomotive was hurled down an embankment and another thrown across the track. The train comprised 23 cars drawn by two heavy locomotives. It was going at a rapid speed when the elephant was sighted directly in front on the center of the track, and apparently impressed with the idea that his position was impregnable. As to the outcome, the *Times* says:

"The elephant was killed outright, and the long train brought to a standstill so suddenly was badly damaged. One of the big locomotives rolled down the embankment and the other now lies across the track. One of the oilers jumped and the engine fell on top of him. He was horribly mangled. The other man killed was one of the brakemen. Three other men were also injured, one so badly that his recovery is despaired of.

"The collision derailed thirteen of the goods wagons and tore the permanent way all to pieces. Several of the wagons contained firewood and this was distributed over a wide area on both sides of the line. The guard's van which was next to the engine was broken into matchwood. Everywhere the line bears traces of the results of the collision, the great carcass of the elephant lying near the engine which brought about its end."

And they say railroading in the Eastern Asia is monotonous.

COLONIZING SIBERIA

While reference is continually made to the political conditions in Russia proper, little attention has been paid to the Eastward movement of Russian industrials, that is serving to reclaim the unoccupied area which a decade ago served in name to provide a synonym for bleakness, exile and extreme cold, now blossoming as the rose under the hand of the Russian husbandman. The report of the minister of agriculture at St. Petersburg throws some interesting light on the subject and would indicate that the Russo-Japanese war instead of discouraging the Russians in the East, served to promote the settlement of Siberia. Indeed, the report indicates that more settlers are arriving from Russia every year than there were soldiers in the Manchuria campaign and that the accumulation of years in numbers and industry means an invasion that more than trebles the Japanese invasion of Manchuria.

According to the report referred to, during the months of January, February, and March of this year, 420,000 Russians of the industrial class settled in Siberia. After the war and up to 1906, an average of 60,000 settlers arrived yearly and then the number jumped in 1906 to 180,000; 1907 to 400,000, and judging from the 1908 movement, a million may be expected to make their homes in this region.

It has been said that the movement was organized by the Russian government to counteract the influence of the Chinese settlers, but this is officially denied. It is claimed that the soldiers returning from the East after the war spread the gospel of Siberia among the poor industrials and the trans-Siberian rail-

way made the emigration possible. It became an Eastern movement of the people for more elbow room and better prospects along the same lines as the great exodus from Eastern America to the great West. In Russia the Greely cry is "Go East, young man," and grow up with the country. This advice is being followed with avidity and those who hope for the regeneration of the country point to this movement as the first important step in that direction.

The wealth of Siberia is as unknown as the territory of Alaska when purchased by the United States or of the fertile territory in the vicinity of Edmonton which at one time was believed to be a land of snows and continual winter by Canadians, before the steam horse invaded that section. The next decade promises equal development for Siberia that has characterized the American and Canadian West in the last decade.

LUKE E. WRIGHT

The appointment of General Luke E. Wright to the portfolio of War in the cabinet at Washington to round out the remaining months of the Roosevelt administration presages his selection for the same post if Taft is elected president. Comment in the United States assumes that this appointment at this time is nothing more or less than a political maneuver on the part of the administration to catch a part of the Southern gold democratic vote and at the same time to eliminate Wright from the campaign where he might damage Taft's chances. It is well known that while governor-general of the Philippine Islands, General Wright held views as to the correct and wise administration of the Philippine Islands directly opposite to those entertained by Secretary Taft, his predecessor, and to his loyalty, to his personal convictions may be traced his elevation to the embassy at Tokyo.

Wright believed in doing things; he advocated that the entire energy controlled by the government be utilized and directed so as to bring the best possible results in developing the latent resources of the archipelago and creating and encouraging industry among the inhabitants. He believed, as did the FAR EASTERN REVIEW, that America's problem in the Philippines was not political in character, but that there was a real industrial problem that would test the capacity of the best talent and experience to solve. Wright held that once prosperity returned and all industries were brought to a thriving condition with plenty of employment and opportunity for the native to better his material condition, all political agitation would cease and any remaining problems in the Philippines would solve themselves. His words addressed to the Senate Committee of the Philippines were prophetic when he pressed the passage of the Tariff Bill. He told the committee in effect the following:

"We have spent millions in educating the Filipinos. We have devoted our energies to making scholars of them and broadening their viewpoint of life, increasing their necessities and luxuries, and after turning them loose, half educated from the schools, they find no means to satisfy their new aspirations. Gentlemen, we are creating a very dangerous element in the Philippine community."

How true! To-day, the American administration and the American and foreign interests in the Philippines, together with the substantial Filipino interests, are beset on all sides by political agitators, school boy editors and the rag tag and bob-tail of the "Shoe-hombre," all clamoring for the sovereign American people to get out and give them all the governmental positions. There is no other field for them to gain a livelihood.

Wright, while governor-general of the Philippines, stood for material progress, and in so doing incurred the enmity of the job-chasers and political dreamers who refused to work, or put their shoulder to the wheel. Sympathetic, kindly, honest and generous to all who came in contact with him, and in full sympathy with the true spirit and true interpretation of the humane policy laid down by

President McKinley, he endeavored to make the native of the Philippines realize the only true road to prosperity and happiness and to help him by kind words of encouragement on the way.

That Wright has been selected by Roosevelt and Taft to rule over the destinies of the Philippines and their people for four years to come, indicates a change of heart in Washington and should bring assurance to Americans and foreigners in the islands, who were Wright's greatest admirers and supporters, that he would not sacrifice his earnest convictions regarding the policy to be pursued in the islands to secure a position in any cabinet, and that his acceptance of the position of secretary of war meant that his well defined position on Philippine policy is to feature his administration, and that Roosevelt and Taft must have been convinced and brought in harmony with General Wright's views.

The Filipino with vested interests in the islands, the foreign and American businessmen in the Philippines, may, we believe, look forward to a new and broader policy which will bring a long delayed prosperity to the archipelago. Some of the leading American newspapers are alarmed at the possibility of Philippine "specialists" controlling the War Department indefinitely to the exclusion of other favorite American statesmen of the domestic order.

In our humble opinion, so long as the United States retain the Philippines, some governor-general in sympathy with the administration in power must perforce be considered as having the strongest claim on the position, and in making the present selection, President Roosevelt has found the one man capable of presiding over the department as a successor of Taft, and the only man who thoroughly understands our needs and who is available. He is also the one man who has sufficient strength and prestige in the United States at the present time, to influence senators and congressmen opposed to favorable Philippine legislation.

THE COLONY AT DAVAO

The progress made by the Spanish and American planters in the district of Davao, Mindanao, which is practically a new settlement, has been remarkable in view of the natural difficulties overcome and the isolation from which these pioneers suffered until quite recently when the Philippine government declared Davao an open port. During the last five years, approximately fifteen plantations have been developed and the output in hemp, according to President L. D. Lewis of the Southern Cross Plantation Company, is over 100 piculs of hemp monthly from each plantation.

In a recent letter from Mr. Lewis published in the *Mindanao Herald* he complains of the lack of telegraphic service which places the planters at a disadvantage in gauging the market. The aim of the planters is to ship the product direct to the home market or to the factory and with an open port together with the improved financial condition of the planters, this will soon be realized.

In addition to hemp, other products have been grown successfully in the Davao district and the hemp is of the very best quality. One drawback to which President Lewis refers is the difficulty in securing titles to the land under the prevailing land laws of the Philippines. It is understood that an effort will be made to interest congress and have the necessary amendments made to give the planters ample opportunity to establish title.

In addition to the agricultural development of Davao, the pearling interests of Davao gulf are steadily increasing in value and additions to the fleet now operating there are being made from time to time.

Once Davao has a line of steamers calling at that port regularly and more definite land laws favorable to settlers, the future of that section of the Moro empire will be assured.

OBITUARY

The sudden death in his office from heart failure of Mr. Rudolf Lemke, managing direct-

or of the firm of Messrs. Arnhold, Karberg & Company, about noon June 10th, cast a gloom over the commercial community of Shanghai. He had not been enjoying robust health for months and had, previous to his death, taken a short vacation in Japan, but on the morning of June 10th, he came to his office apparently well. About 11:30 he complained of an acute attack of indigestion, but when medical assistance arrived he was past hope of recovery and passed out at noon.

The deceased was 44 years of age and leaves a widow to mourn his loss. Mr. Lemke was born in Bielefeld, Germany, and married a daughter of Sir Julius Arnhold, the founder of the firm of which Mr. Lemke was a partner and managing director at the time of his death. When he first arrived in Shanghai in 1884 he joined the firm of Messrs. Meyer, Lemke & Co. and nine years later he joined Messrs. Arnhold, Karberg & Co. and until 1899 was manager of the branch at Hankow. Since that time he was connected with the Shanghai office. Mr. Lemke expected to return to the homeland for good next October.

The death of Mr. J. J. Macbean, M. I. M. E. and formerly managing director of the firm of Messrs. Howarth, Erskine, Limited, in Singapore, occurred in London last month. Mr. Macbean retired from active life about two years ago and went to the homeland. General regret was expressed through commercial circles in the Straits on receipt of the news from London.

The death of Mr. V. M. Ponpon, managing engineer of the Tongshan Colliery, operated by the Chinese Engineering & Mining Co., was reported from Tongshan, last month. Death was attributed to tetanus. He was 32 years of age. The funeral took place at the international cemetery, Tientsin.

The death of Mr. Peter Taylor, late dock master of the Shanghai Dock & Engineering Co., occurred at Shanghai last month, aged 40 years. Mr. Taylor came to Shanghai in 1899 to accept a position as dock master for the International Dock. Last year he spent his vacation in the homeland. Upon his return was unable to take up his duties and up to the time of his death was under medical care. Mr. Wm. Taylor of the Shanghai Dock & Engineering Co. is a brother of the deceased. The funeral took place at the Bubbling Well Cemetery.

The details of the murder by the wild hill people of Negros of Forester Harry D. Everett, of the Philippine Forestry Bureau, and T. R. Wakely, a teacher of the Bureau of Education, on or about May 4th, has been received in Manila, and the remains of the two men recovered and brought to the capital.

Mr. Everett was proceeding into the Bayaual Mountains for the purpose of making a reconnaissance in the interests of his bureau and Teacher Wakely accompanied him to enjoy an outing. They left the south coast of Negros about April 27th and were last seen May 4th, near the barrio where they were killed and about five days from the coast. Every effort was made to locate the missing men and it was not until July 4th that definite news was secured and the bodies located. It appears that upon arriving at Datag, a barrio in the mountains, they were welcomed by the chief of the village who gave them food and provided shelter. During the night the massacre took place and, according to the best information, the victims were rendered unconscious before the crime was committed. The savages threw some poisonous plant on the fire near the sleepers and the gases therefrom rendered them helpless. With bolos, spears and axes the victims were done to death and the bodies were found lying beside where the victims slept, there being apparently no struggle. No motive for the crime is known. Mr. Everett was the senior forester in the Philippine Service and served as acting-director during the recent absence of Major Ahren. He was born in Malone, New York State.

FINANCIAL AND ECONOMIC CONDITIONS IN JAPAN

Through the courtesy of the Hon. Minister of the Department of Finance of Japan, the FAR EASTERN REVIEW has received the Eighth Annual and Economic Annual of Japan for the year 1908 which contains an extensive annual résumé of finance, the development in industry, agriculture and commerce together with a review of foreign trade. A special section is devoted to banking and the money market that is of special significance in view of the disturbed conditions following the panic in America and the natural depression following the war. The extension of government control of railways and other public utilities is gone into at length and a comprehensive conception of the year's progress in all branches of activity is made available in this highly valuable volume that Secretary Suzuki has made available. The volume teems with maps, diagrams, introductory and comparative tables. In addition to the reference to Japan proper, a special section is devoted to Formosa and another to Karafuto or Japanese Saghalien. The appendices make special reference to Korean finance, administration, products and foreign trade; the finance and economical status of Kwantung province and a general account of the extraordinary war expenses.

In reviewing the general condition of finance and economical conditions for 1907, Secretary Suzuki says:

"A BRIEF ACCOUNT OF THE FINANCIAL CONDITION.—In the Financial Year 1907-8, the extraordinary special taxes and war loans brought over from the preceding year were not yet adjusted, and as the general economic and financial condition had not yet recovered its normal state, not only was there no increase of taxation, but there was also absolutely no issue of public loans other than those intended to be expended on such productive undertakings as the construction and improvement of railways, extension of the telephone system, and establishment of a steel-foundry. The general expenditure was made out with the strictest possible retrenchment in view.

"The estimates for the expenditure in the above-mentioned year put the ordinary expenditure at yen 422,771,095 (£43,316,711) and the extraordinary expenditure at yen 213,118,795 (£21,835,942), making a total of yen 635,889,890 (£65,152,653), which was an increase of yen 130,927,401 (£13,414,693) on the preceding year. This increase was mainly due in the ordinary expenditure to an increase in pensions and annuities, the national debt charge, and expenditures of the Residency-General and the Horse Administration Bureau, the transfer of the Warships and Torpedo-boats Replenishing Fund, and an increase of expenditures consequent upon the strengthening of military defences, while the increase in the extraordinary expenditure is attributable to the enormous expenditures required for the enlargement of the harbor accommodation at Kobe, strengthening of military defences, replenishment of warships and torpedo-boats, grants in aid of agriculture and industry, establishment of the Tohoku (North-eastern) University and other educational institutions, and holding of the Japan Grand Exhibition, and for the extension of the telephone exchange business.

"Although the Budget for the Financial Year 1907-8 thus shows a great expansion compared with that for the preceding year, it is mainly because, in the case of undertakings the disbursements for which should be included in the extraordinary war expenses, the expenditures for such as had not yet been completed had been adjusted by including them in the normal Budget as continuing expenditures; and the change was effected in a very economical manner.

"The principal financial events during the financial year under consideration may be briefly stated as follows:—

"Investigation of the Customs Tariff.—As the time is now approaching for the revision of the treaties with the treaty powers, the investigation of the Customs Tariff has been carried on since the Financial Year 1906-7, and most of the necessary materials have already been collected.

"Unification of the Monopoly Business.—For conducting the monopoly business, the Government recognized the necessity of unifying the business of the various monopolies, and accordingly, after abolishing the existing organizations of the Tobacco Monopoly Bureau, the Salt Offices, and Camphor Offices, established afresh the organization of the Monopoly Bureau to take charge of the business relating to the three monopolies of tobacco, salt, and camphor.

"Transportation and Sale of Salt.—With a view to the full supply of salt and the lowering of its price, warehouses for the sale of salt were set up in localities which were deemed specially necessary for the purpose, and the Government took upon itself to transport salt and sell it direct."

"Direct Sale of Camphor.—A sole agency had hitherto been appointed for the export and sale of camphor produced in Japan Proper; but as some years had passed since the establishment of the monopoly and there was no longer necessity for such agency, the Government decided to carry on the exportation and sale by itself.

"Revision of the Coinage Law.—A Law for revising a portion of the Coinage Law was promulgated on the 6th March last year and put in operation on the 1st April following. The revision consisted in the lightening of the weight of the subsidiary silver coins in order to prevent the melting down of silver coins in view of the appreciation of that metal. The coins struck under the revised law up to the end of November of the same year amounted to a million yen.

"Abolition of the Branch-office of the Mint.—On the 1st June, 1907, by Imperial Ordinance No. 197, the Branch-office of the Mint was abolished; and the business managed up to that time at the Branch-office was taken over by the Bank of Japan; and in connection with this change, the Regulations respecting the refining of bullion for coinage and the certification of fineness were revised, and the fees charged for the deposit of silver bullion by the Bank of Japan were reduced.

"Reduction of the Face-value of Mortgage Debentures.—The savings debentures which were issued during the war ceased to be issued upon restoration of peace; and as the necessity of absorbing the small capitals held by the lower classes was still recognized, the face-value of the mortgage debentures was reduced from twenty yen to ten yen with the object of effecting such absorption.

"Unsecured Loans to Industrial Associations.—Although at first restrictions were put upon the descriptions of associations, such restrictions were removed after the war in view of the necessity of bringing about the development and prosperity of associations of all descriptions; and pecuniary accommodations were made to such associations as were firmly established and enjoyed high credit.

"Supply of Funds to Agricultural and Industrial Banks.—As hitherto the Agricultural and Industrial Banks had, when their funds for advancing loans ran short, no satisfactory means of obtaining the necessary funds, they were made to confer with the Hypothec Bank of Japan, the result of which was that the Agricultural and Industrial Banks were to co-operate in obtaining subscriptions for the mortgage debentures, in return for which the Hypothec Bank was to accommodate them with the proceeds of the debentures and the banks also were to reduce the rate of interest on their loans.

"Conversion and Consolidation of the Six per cent. Sterling Loans.—For the conversion and consolidation of the Six per cent. Sterling Loans amounting altogether to £22,000,000 which were raised in London and New York in May and November, 1904, provisions had already been made by Imperial Ordinance No. 241, of 1905; but as there were not a few points needing alteration in the manner of raising a loan and the agreements required therefor so as to suit the prevailing condition of the foreign markets, another Imperial Ordinance (No. 23) was issued for the purpose in March last year,

and a five per cent. Sterling Loan of £23,000,000 was raised in London and Paris and with the actual proceeds thereof the whole of the six per cent. loans amounting to £22,000,000 was redeemed on the 10th September of the same year.

"Succession to and Adjustment of the Debts of the Former Railway Companies.—The following are the amounts of the debts of the former railway companies taken over by the Government according to the provisions of the Railway Nationalization Law and the Keifu Railway Purchase Law and the amount of such debts already redeemed:—

	Yen
Amount outstanding at the end of 1906.....	17,755,200
Amount taken over during 1907....	24,269,940
Amount redeemed during 1907.....	15,734,010
Amount outstanding at the end of 1907.....	26,291,130

"The amount of the five per cent. loan issued for the adjustment and redemption of these debts in accordance with the provision of Art. XV of the Railway Nationalization Law came up to yen 13,366,250 (£1,369,493).

"Payments on Rough Estimates of the Purchase-prices of the Railways.—As the sums which are according to the provision of Art. XIII of the Railway Purchase Law to be paid to a company at its usual dates for the settlement of accounts until the date of delivery of the public loan bonds for the purchased railway at the rate of five per cent. per annum on the purchase-price could not be paid when the dates for settlement arrived as the purchase-price was not yet definitely decided upon and thereby inflicted great losses upon the shareholders of the company, it was decided to make the payments on rough estimates of the purchase-price in cases only where it was deemed that no objections would be raised respecting the succession to rights and obligations, calculation of the purchase-price, and important matters to be settled by agreement; and accordingly an Imperial Ordinance relative thereto was promulgated in May, 1907. The companies to which the payments on rough estimates were made under this Imperial Ordinance were the Kobu and five others, and the total amount paid was yen 14,346,205 (£1,469,898).

"Besides the above sum, payments were made on definite purchase-prices to the Keifu Railway Company and two others, and the amount paid was yen 2,367,983 (£242,621).

"Issue of the Public Works and Railway Loans.—The estimated amount required to be issued during the Financial Year 1906-7 in accordance with the provisions of the Railway Construction Law, the Public Works Loan Regulations, and the Hokkaido Railway Construction Law was yen 16,650,000 (£1,705,943); but eventually it was not issued in that financial year, and in October, 1907, the Imperial Japanese Five per cent. Loan Bonds to the face value of yen 17,231,450 (£1,765,517) were issued to be taken up by the Deposit Section of the National Treasury.

"Increase of the Annual Revenue.—The results of the revenue have annually been satisfactory and the actual receipts have always shown a large excess over the estimates; above all, the receipts from the taxes and duties have since the restoration of peace shown a marked natural increase every year although there has been no imposition of new taxes or rise in the rate of taxation, and has thereby proved the great power of the nation to bear taxation. Upon comparing the actual revenue for the Financial Year 1907-8 with that for the one preceding, we find that the taxes and duties have increased by yen 31,000,000 (3,176,230) or 80 per cent., receipts from Public undertakings and State property by yen 7,000,000 (£717,213) or 190 per cent., and the total ordinary revenue by yen 67,000,000 (£6,864,754) or 190 per cent.

"Upon comparing the actual revenue for the Financial Year 1907-8 with the estimates, we find an increase of yen 46,000,000 (£4,713,115) in the taxes and duties, of which the

increase was 170 per cent. in the income tax, 180 per cent. in the *sake* tax, 390 per cent. in the soy tax, 210 per cent. in the textiles consumption tax, and 380 per cent. in the Customs duties.

"A Brief Account of the Economic Condition."

—The economic world in 1907 felt the reaction from the mania for enterprises which suddenly arose after the war, and the market remained constantly in a depressed condition on account of the heavy fall in stocks, the panic in America, and the depreciation of silver. However, although the bubble companies which were projected when the stocks commanded high prices had either to be given up or to be dissolved upon the stocks falling heavily, those new companies which had been established on a firm basis and concerned in enterprises of profitable character commenced business and prospered. Above all, in spite of the depressed state of the central money market, the resources of the agricultural classes in the provinces increased owing to the success of the silk industry and the rice crop; there was also a marked increase in the bank deposits and postal savings; the aggregate capital of newly-established or enlarged companies amounted to yen 520,000,000 (£53,278,689), of which yen 200,000,000 (£20,491,803) was paid up; and with the establishment of new companies there was naturally an increase of products of all kinds and the export trade, notwithstanding the various obstacles which it encountered, still continued to increase, which must be deemed to be the result of this increased production.

"Amount of Issue of Convertible Notes."—The amount of convertible notes issued during 1907 exceeded yen 310,000,000 (£31,762,295) in every month except April and May when it was yen 299,000,000 (£30,635,246) and yen 294,000,000 (£30,122,951) respectively. The only time previous to that year when the amount of issue exceeded yen 300,000,000 (£30,737,704) was December, 1905, when it was yen 312,000,000 (£31,967,213), and it was no more than a temporary rise at the end of a year. But in December, 1906, the figures rose suddenly to yen 340,000,000 (£34,836,066) and did not fall with the new year; they maintained their high level and reached yen 369,984,000 (£37,908,197) in December of that year, which was unprecedentedly high. This steady increase in the amount of convertible notes issued without any sign of diminution was caused by the great general expansion of our national economy and finance after the war with Russia, the extension of the sphere of circulation of convertible notes to Korea and Manchuria, and increased demand for capital for the purpose of bringing out new enterprises; it was therefore a natural outcome of the development of our economic world.

"Advances by and Deposits in Banks in Principal Localities."—Upon looking at the amount of loans advanced by banks in the principal localities of the country during 1907, we find that the advances were smallest in May, and yet even then they stood at yen 685,000,000 (£70,184,426), an increase on the same month of the preceding year of yen 162,000,000 (£16,598,361). They amounted to yen 830,000,000 (£85,040,984) in January, 1907, and fluctuated between yen 700,000,000 (£71,721,311) and yen 800,000,000 (£81,967,213) throughout the year except in May; and these figures when compared with those for the preceding year which remained between yen 500,000,000 (£51,229,508) and yen 600,000,000 (£61,475,410), show a marked expansion and testify to the magnitude of the demand for capital consequent upon the general increase of production.

The amount of deposits during the past year sometimes exceeded yen 800,000,000 (£81,967,213) and seldom fell below yen 700,000,000 (£71,721,311) except in August, October, and November when it was between that figure and yen 600,000,000 (£61,475,410). This was a marked increase on the figures for the preceding year which had fluctuated between yen 600,000,000 (£61,475,410) and yen 700,000,000 (£71,721,311).

"Postal Savings."—The amount of postal savings deposits stood at the beginning of the year 1907 at yen 74,000,000 (£7,581,967), after which it increased from February onward

by from one to three million yen per month until, at the end of the year, it reached the enormous figure of yen 91,000,000 (£9,323,770), which is an increase of about yen 23,000,000 (£2,356,557) on the figure at the end of the preceding year and is three times the amount just prior to the late war, which was only yen 30,000,000 (£3,073,770). This remarkable increase of postal savings must be mainly attributed to the progress of the general national economy, although there are at the same time such special causes of the increase as numerous deposits of the pecuniary rewards granted after the late war and the general adoption of the book-transfer savings deposit system.

"Amount of Bills Cleared."—The total amount of bills cleared during 1907 in Tokyo, and five other great cities of the Empire was yen 7,483,000,000 (£766,700,820), which, when compared with the amount for the preceding year which was yen 7,124,000,000 (£729,918,033), shows an increase of yen 359,000,000 (36,782,787). Although this increase is certainly unprecedented in volume, it cannot be called great when it is compared with the rate of increase during the past years; indeed the rate of increase would appear to have fallen during 1907. This reduction in the rate of increase is due to a reaction against the great activity of speculative enterprises which had been going on since the preceding year, whereby the economic world lost its normal tone with the result that a slight shrinkage took place in the circulation of bills. However, the fact that, in the face of the various causes that were at work hampering the development of credit transactions, the clearances should maintain their tendency to increase, affords an evidence of the firmness of the basis of our economic world.

"Prices of Securities."—Throughout the year 1906 the circulation of money remained generally slack and as, at the same time, the nationalization of railways and amalgamation and increase of capital of private companies followed one another in rapid succession, securities of all kinds were quoted at unprecedentedly high prices; but the reaction came in the following year, and the stock market became extremely quiet, while the securities began to fall from March onward and up to the end of the year betrayed no sign of recovery therefrom.

"Prices, Wages, and Rates of Interest."—The prices have, in spite of slight fluctuations from time to time, maintained on the whole their tendency to rise every year. Thus, taking the average price of the principal commodities in October, 1900, as 100, we find the average price at the end of 1906 to be 123.75; and with the new year it rose still higher and stood in May at 127.78. Although in June and July there was a fall in the prices of raw silk, copper, barley, and a few other commodities, they all rose in August, from which month up to the end of the year the average price always fluctuated between 128.12 and 133.61.

If the average of the wages in October, 1900, be taken as 100, during the years 1904-5 the average sometimes fell as low as 92.7 and rose at other times to 113.5 and was constantly fluctuating. These fluctuations, however, ceased upon restoration of order and the wages showed generally an upward tendency. Thus, at the end of 1906 the index number was 120.6, and during the first half of the following year it was slightly over 120 and stood at 126 in July. Towards the close of the year it rose still further and was as high as 137.7.

The market rate of interest in August, 1905, was 3.08 sen, and then gradually fell until it was 2.16 sen at the end of the following year. In 1907 it still fluctuated between 2.60 and 2.70 sen, but rose at the end of year to 2.79 sen. The Bank of Japan rate of interest was lowered twice in 1906 and stood in May of that year at 1.8 sen, which rate was maintained up to November of the following year and was raised to 1.9 sen in December.

"Crops of Rice, Barley, Wheat, and Rye."—As the weather was favorable, the growth of rice last year was extremely good and the yield of rice was as high as 49,043,000 koku, an increase of 5.9 per cent. on the preceding year and of 11.8 per cent. on the normal year.

The actual yield of barley, wheat, and rye in 1907 was 22,167,400 koku, an increase of

8.8 per cent. on the preceding year and of 13.6 per cent. on the normal year.

"Foreign Trade."—The total volume of foreign trade in 1907 reached the enormous figure of yen 926,000,000 (£94,877,049), an increase of yen 84,000,000 (£8,606,557) on the volume in the preceding year which was yen 842,000,000 (£86,270,492).

On taking the exports and imports separately we find that the volume of exports was yen 432,000,000 (£44,262,295), an increase of yen 9,000,000 (£922,131) or over 2 per cent. on that in the preceding year which was yen 423,000,000 (£43,340,164), while the imports amounted to yen 494,000,000 (£50,614,754), an increase of yen 76,000,000 (£7,786,886) or 18 per cent. on those in the preceding year which came up to yen 418,000,000 (£42,827,869). A comparison of the imports and exports shows an excess of the former amounting to yen 62,000,000 (£6,352,459). In 1906, after the restoration of peace, the market had recovered and moreover, as the economic world in Europe and America was in a favorable condition, it led to the activity of our export trade; and the long succession of excess of imports over exports which had continued since 1896 was broken and, small as it was, an excess of exports was the result. At the beginning of 1907 it was believed that the same tendency would be continued and that the year would show a more or less excess of exports. But the events belied these expectations. The export trade, it is true, made from the beginning of the year a very favorable progress; but from September the depreciation of silver became more and more accentuated and dealt a heavy blow to our China trade, the depreciation of copper in the latter half of the year seriously affected our export of that metal, and finally the great panic which took place in the United States in October and November resulted in the reduction of the sale of raw silk for export to that country. Thus, from these various causes the export trade in 1907 was, at the season when that trade is usually most prosperous, in an exactly opposite condition and so failed to justify the high expectations that had been formed of it.

The import trade, on the contrary, was very active. An increase in the importation of industrial raw materials and machinery to keep pace with the development of our industries caused a marked expansion of the volume of our import trade and so upset the balance between imports and exports.

In short, although our foreign trade in 1907 ended in an excess of imports amounting to yen 62,000,000 (£6,352,459), yet while the rate of increase of the imports was high, the exports still showed also an increase, small as it was. And taken as a whole, it cannot be doubted that our foreign trade is making steady progress."

THE KUALA LUMPUR ELECTRIC POWER SCHEME

The following is from the *Engineering Review*:—

This scheme is a very good example of how advantage may be taken of the presence of water power to generate electricity for lighting and power. Water is taken from the Gombak River in the State of Selangor in the Federated Malay States and utilized in turbines which drive three-phase alternators generating at 6,600 volts. Electric energy is then transmitted over a distance of about ten miles to the State Capital, Kuala Lumpur, where it is transformed down at a sub-station by means of motor generators to a continuous current three-wire distribution with 440 volts across the outer wires. In addition to this distribution three-phase current at 400 volts and 40 periodicity is used in the Government railway workshops in the city. The estimated minimum flow of water when the scheme was put in hand was 1,400 cubic ft. per minute with a head of 340 ft. The capacity of the plant, which was supplied and erected by the Oerlikon Company, is 1,200 h. p., but half of this is intended as a standby, and additional steam power is available in a case of need.

THE COAL FIELDS OF KYUSHU

The island of Kyushu is one of the most important coal producing and exporting sections of the Japanese empire. The best coal produced in Japan is mined at Hokkaida, but while the Kyushu coal is of an inferior quality, the export from the island is about four times the amount shipped from Hokkaida.

The history of coal mining in Japan dates back to the earliest times and it was not until 1868 that an effort was made to employ modern methods in this industry and several foreign experts were engaged and private enterprise encouraged under their direction. In 1885 the mines of Kyushu were put on a modern working basis. Steam machinery was introduced and so successfully did the operators develop the output that in 1889 a large quantity was exported. In fact during the last 33 years the amount of export increased from an insignificant amount to over 12,000,000 tons and a value of over 4,500,000 yen.

In this regard the following table and comment on the mines of this island covering the statistics for the years 1891-1905 inclusive has been prepared by Mr. W. B. Cunningham, Student Interpreter of the British Embassy at Tokyo:

Year.	Quantity. Tons.
1891-95 (average).....	3,742,381
1896.....	5,019,690
1897.....	5,180,041
1898.....	6,696,033
1899.....	6,721,798
1900.....	7,429,457
1901.....	8,945,939
1902.....	9,701,682
1903.....	10,088,845
1904.....	10,723,796
1905.....	11,542,041

"From this table it will be seen that the output of coal has more than doubled during the 10 years 1896-1905, while the yearly output at present is more than three times the average for the five years 1891-95. The average annual rate of increase for the last 10 years has been about 600,000 tons. The value has also increased very considerably in recent years, having risen from 3,291,226l. in 1902 to 4,069,722l. in 1905.

"The total output for the year 1906 is estimated to exceed 13,000,000 tons.

"The principal coalfields in the Island of Kyushu are as follows:—

"(1) The Chiku-ho coalfields, lying in the two provinces of Chikuzen and Buzen. The mines in this district produce more than half the total output of Japan, though the mines themselves are small.

"(2) The Miike mines on the borders of the provinces of Higo and Chikugo. These mines produced in 1905 more than one-seventh of the whole amount produced in Kyushu, and more than three times the amount produced by any other mine in the country, while the output is likely to increase still further during the next two or three years.

"(3) The Takashima mines on three small islands lying about 7 miles from Nagasaki in the entrance to the harbor. The coal from these islands is the best produced in Japan.

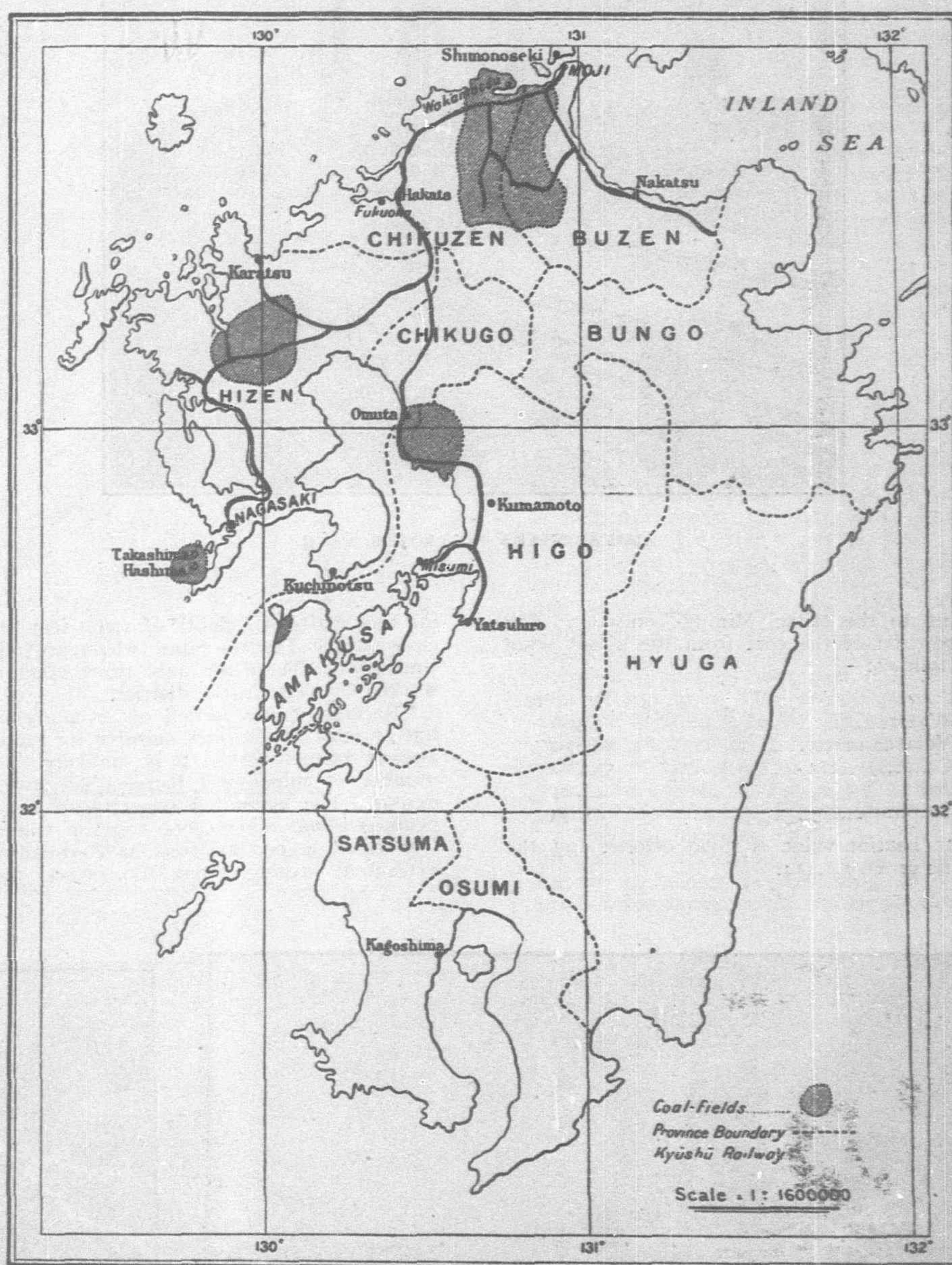
"There are also coalfields covering a considerable area in the province of Hizen, while in the Island of Amakusa, which forms part of the province of Higo, there are several mines producing small quantities of anthracite.

"The Chiku-ho Coalfields.—The date of the discovery of coal in this region is not exactly known, but it is certain that some of the existing beds were worked more than two centuries ago, and by the middle of the nineteenth century the coal was being exported in considerable quantities to various markets in the vicinity of the coalfields. During this time the work was confined entirely to surface seams, and it was not till the year 1881, when a steam boiler was first introduced at the Meo mine, that modern methods of extraction were employed.

"Hitherto many small concessions had existed, but recently the policy of the Government has been to discourage this system while encouraging small owners to combine. Meanwhile railway construction was pushed forward in the district to facilitate the transportation

however, very considerably in extent and thickness in different districts, and may be divided into upper and lower strata as regards the quality of the coal. The coal obtained from the upper seams is inferior in quality to that obtained from the lower strata, which, however,

MAP OF KYŪSHŪ



of the coal from the mines to the harbors of Moji and Wakamatsu, whence most of it is exported. Finally, a great impetus was given to the trade by the Japan-China war in 1894, and since that time the industry has steadily increased.

"The Chiku-ho coalfields lie in the two adjoining provinces of Chikuzen and Buzen, both in the Fukuoka prefecture, and embrace the five administrative districts of Onga, Kurate, Kaho, Tagawa and Kasuya. The total area is about 90,120 acres. The mines are scattered over this large area, and altogether there are considerably over 100 in operation. Although the number of mines is large, the mines themselves are small, and they are for the most part owned and worked by private operators or small companies.

"The seams in this coalfield are numerous, and more than 10 are workable. They vary,

cover an area five times as great as that covered by the former. On the other hand, the upper seams are more easily worked, though owing to the inferiority of the coal very little is actually extracted.

"The principal seams worked are two in number, being 3 and 5 feet in thickness respectively in the province of Chikuzen, and 4 and 8 feet respectively in the province of Buzen. The slope of the seams varies considerably in different parts; in some places it is as much as 30 or more degrees, and in others as little as 5 or 10 degrees. The average is about 15 or 20 degrees.

"Generally speaking the coal is bituminous and caking, and not of a very good quality. In color it is slightly brownish. It is chiefly used for steam purposes, and is an excellent coal for use in ships. As a rule it is not very suitable for the making of coke, though the

district of Kurate produces a considerable quantity of coal suitable for this purpose. In some places natural coke is found owing to the penetration of volcanic rocks through the coal-bearing strata.

"The best coal is that produced from the 4 and 8-foot seams at the Tagawa mine, be-

"The majority of the mines are worked by incline, and there are comparatively few shafts at present in operation. At the Mitsu Bishi Company's Hojo colliery there are two shafts of a depth of 900 feet, and these are the deepest at present in use. The Tagawa mine is worked by incline, but the Mitsui Company are sink-

force. The work of cutting the coal is entirely done by hand, the miners working together in groups of four or six. All the mines are well equipped with underground hauling machinery, though ponies are also employed in some cases.

"The number of men employed is about 50,000, the largest mines employing as many as 2,000 or more. The miners work in two shifts of 12 hours each, and work on the average from 9 to 10 hours during that time. Wages are practically the same at all the collieries, averaging about 70 sen (1s. 5¼d.) a day. In some cases the men are paid partly in kind, when they receive about 40 or 50 sen per day. Women are employed in most of the mines, receiving on an average from 10 to 25 sen less than the men. The number of children employed is small. Workpeople employed outside the mine receive slightly lower wages, the difference varying from 10 to 20 sen in different mines.

"The following table shows the number of principal mines in the five districts of Onga Kurate, Kaho, Tagawa and Kasuya, together with the area mined in each district and the output for the year 1905:—

District.	Number.	Area. Acres.	Output. Tons.
Onga.....	19	11,177	526,368
Kurate.....	18	18,046	1,383,966
Kaho.....	48	32,918	2,060,198
Tagawa.....	35	26,252	1,772,683
Kasuya.....	3	1,729	60,875
Total.....	123	90,122	5,804,090

"In 1906 the total output was 6,034,227 tons, being an increase of over 230,000 tons. This increase was due to the opening of several new mines during the latter half of the year.

"The output for the year 1906 was made up mainly as follows:—

	Quantity Tons.
Lump.....	1,851,422
Dust.....	1,425,354
"Kirikomi".....	2,566,315
Natural coke.....	112,432
Anthracite.....	37,217

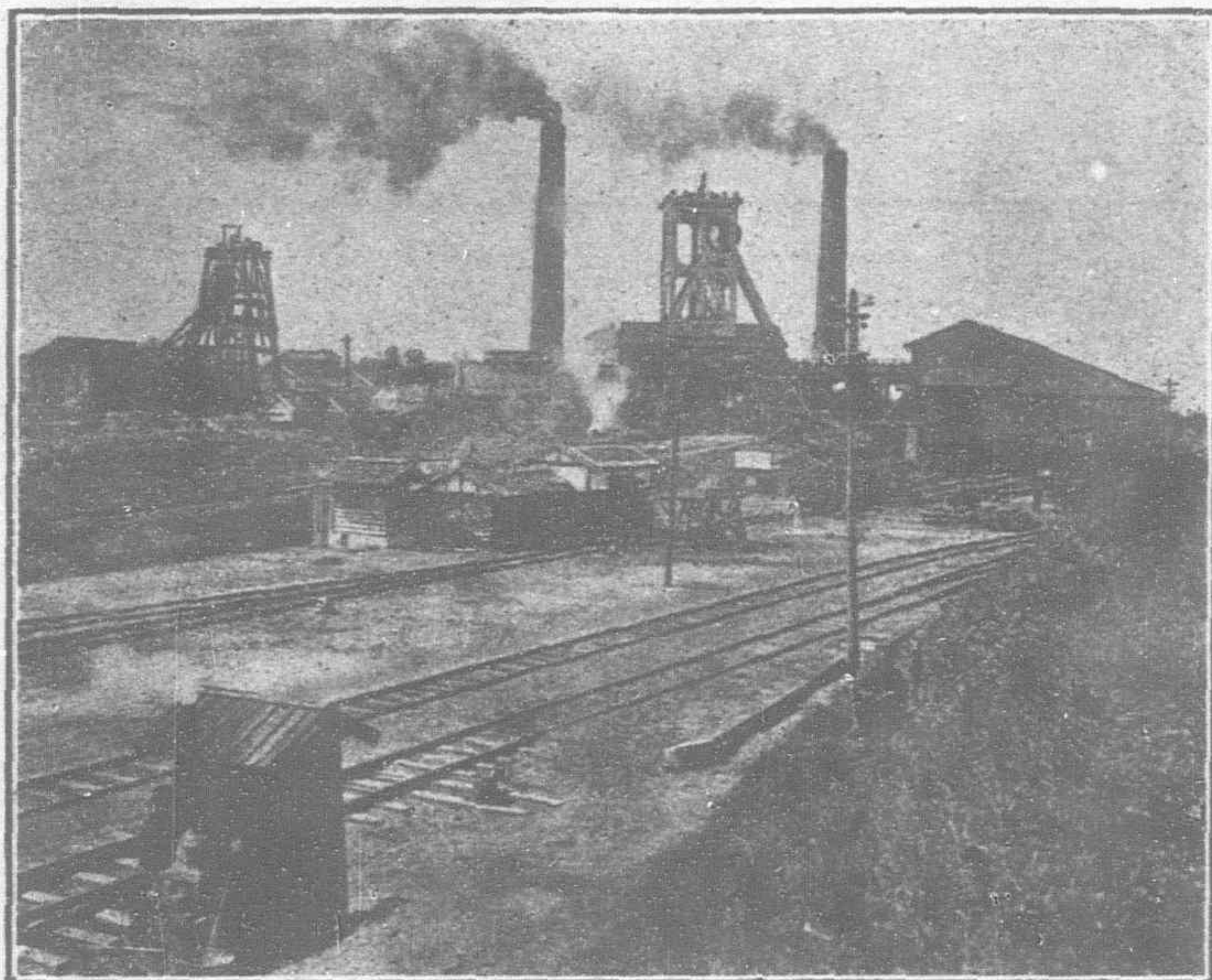
longing to the Mitsui Mining Company. The composition of the coal from the 4-foot seam is as follows:—

	Per Cent.
Water.....	1.400
Volatile matter.....	40.830
Coke.....	53.120
Ash.....	4.404
Sulphur.....	0.246

"Its heating value is 7,920 calories and the specific gravity 1.314.

ing two shafts of a depth of 1,000 feet at Ida, close to the Tagawa mine, which are not yet completed. There are only three other mines worked by shaft in the district.

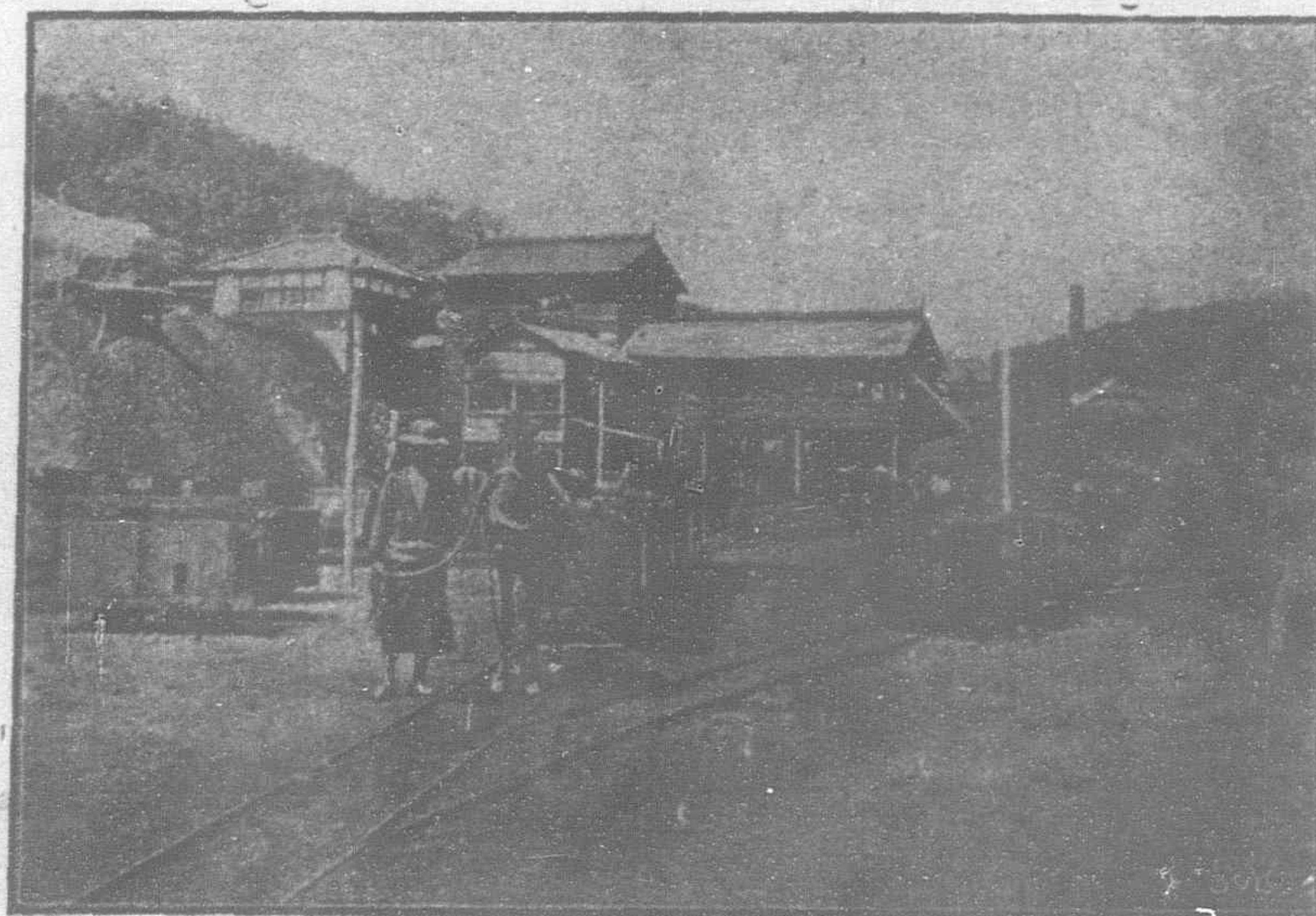
"Boring is being carried on in many places, but as most of the sites suitable for mines are already being worked it is unlikely that the number of mines will increase to any great extent. The estimated capacity of the coal-fields is about 600,000,000 tons; of this quantity about 40,000,000 tons have already been extracted, leaving about 560,000,000 tons to



MIYANO-HARA PIT, MIIKE MINE



MANNAURA MINE, OHNOURA COLLIERY



SCREENING HOUSE, SUGANUSTA MINE

"The principal mines number 123, though there are numerous others from which the output is comparatively small. The Tagawa and Yamano mines, belonging to the Mitsui Mining Company, and the Namazuta and Shinnyu mines, belonging to the Mitsu Bishi Company, are among the largest and most important.

be worked, which at the present rate of extraction will last about 100 years.

"The method of working varies between the longwall and pillar and stall systems. In some mines the longwall system alone is employed, as is the case at Namazuta. At Yamano the pillar and stall system is used, while at Tagawa a modification of the two is in

"The owners of the coal mines in the Chiku-ho district have amalgamated and formed the Chiku-ho Sekitan Kogyo Kumiai (Chiku-ho Coal Mining Association), with its head office at Wakamatsu. This association undertakes the collection and distribution of the coal produced from the mines belonging to the members.

"The greater part of the coal is sent to Wakamatsu and Moji, the Kyushu Railway offering good facilities for its transportation. A considerable quantity is carried from Wakamatsu to Moji by sailing barges with a carrying capa-

exported to China, Korea, Singapore, Hong-kong, the Philippines and the Dutch East Indies.
 "The following table shows the amount of coal exported from Moji and Wakamatsu during the year 1905:—

and were among the first to be worked in Japan. About 200 years ago three mines had been opened. In the year 1873 the Japanese Government purchased the mines, and remained in possession till the year 1889, when they were sold to the present owners, the Mitsui Kōsan Kwaisha (Mitsui Mining Company), a branch of the well-known Mitsui firm, at a cost of 4,500,000 yen (about 460,000l.). At that period only three mines were in operation, but since then three new mines have been opened, modern machinery has been introduced and the work developed to an enormous extent. At the present time the mines are the largest in Japan, and produce on an average 4,000 tons of coal in a working day of 24 hours.

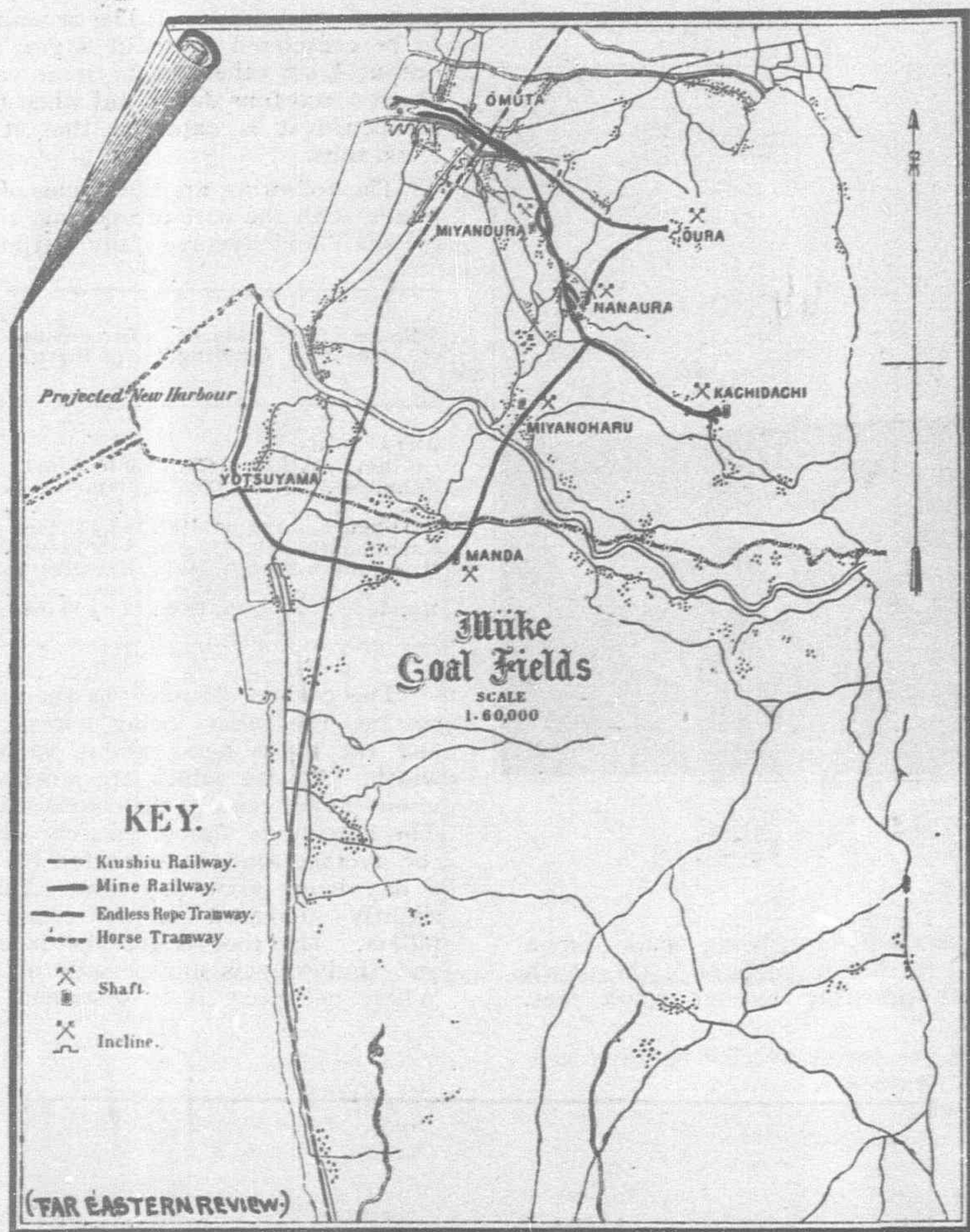
"The concession lies on the borders of the two provinces of Chikugo and Higo on the coast of Shimabara Gulf, being partly in the prefecture of Fukuoka and partly in that of Kumamoto, though the mines at present in operation are all situated in the former. The chief town in the district is Omuta, where the offices of the company are situated, and it has a station on the Kyushu Railway from Moji to Yatsushiro.

"The total area of the concession is about 14,000 acres, the area actually worked being slightly less than 3,000 acres. The coalfields stretch for a distance of about 4 miles inland from the shore of Shimabara Gulf, while from north to south they extend for about 10 miles from Omuta, which occupies the northern end of the field.

"Several seams exist in the Miike coalfields, of which only two are worked. Generally speaking the slope over the whole field averages 13 degrees, though it varies slightly in different localities. The general direction of the slope is from north-west to south-east, but at the Manda mine it is from north to south.

"Of the two principal seams the first is by far the best, being remarkably free from partings and interstratified bands of shale. The coal from this seam is very pure and uniform in character. The thickness of the seam varies between 5 and 25 feet, and averages 8 feet over a large area. The second seam lies at a distance of from 6 to 10 feet below the first, and has an average thickness of 5 feet. The coal from this seam is of inferior quality, being non-caking, and it is only mined to a limited extent for local consumption.

"The coal obtained from the 8-foot seam is bituminous and caking, and is an excellent one for use in boilers, besides being the best coal produced in Japan for the making of coke.



city of about 100 tons. The harbor of Wakamatsu cannot admit ships of more than 3,000 tons burden, so that the number of vessels which coal at that port is small. Moji, on the

Where Exported.	Quantity Tons.
Corea.....	41,821
China.....	782,409



NO. 1 MINE, OHTSUJI COLLIERY

other hand, offers greater facilities, and of late years has come into great prominence as a coaling port for cargo steamers. The large mail steamers continue to coal at Nagasaki owing to the superior anchorage at that port. A considerable quantity of the coal is used as bunker coal, while the remainder is chiefly

Hongkong.....	440,844
Singapore.....	13,291
Other countries.....	20,750
Total.....	1,299,115

"The Miike Coalfields.—These mines were discovered more than four centuries ago,



OHNOURA MINE

"The following is an analysis of the Miike 8-foot coal made by the Geological Bureau of the Department of Agriculture and Commerce in 1895:—

	Per cent
Carbon.....	75.19
Hydrogen.....	5.13

Nitrogen.....	0.92
Oxygen.....	8.92
Ash.....	6.84
Moisture.....	0.62
Sulphur.....	2.38

"At present work is being carried on at six places on the coalfield. The depth of the shafts increases from north to south owing to the inclination of the strata, varying from 176 feet at the Miyanoura mine to 896 feet at

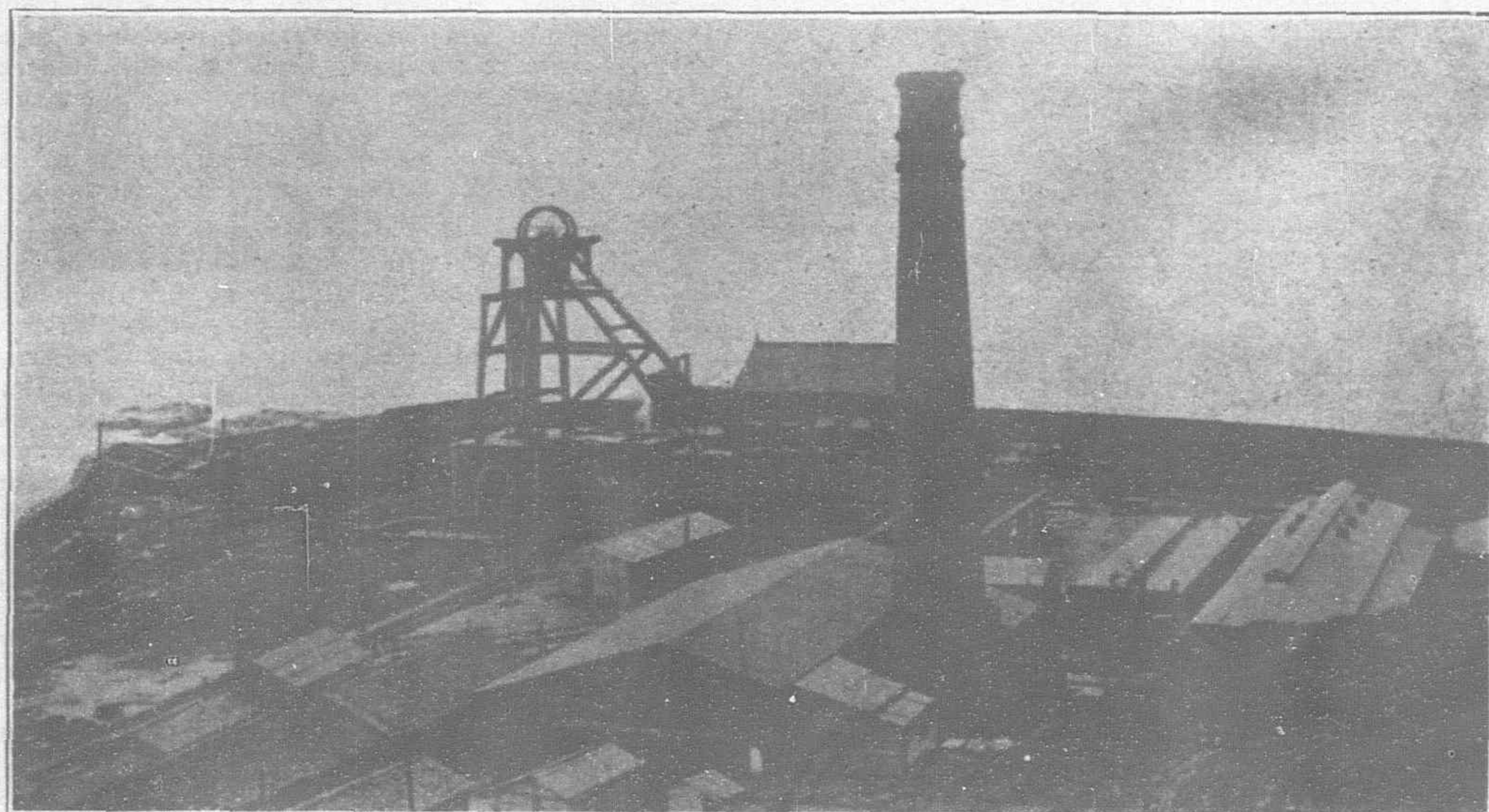
The site has already been chosen, and work is to be begun shortly.

Oura is a mine worked by incline; all the others are worked by shaft. The newest is that at Manda, which was only opened in 1903. There are two shafts, only one of which is at present in operation. The second is expected to be completed in about a year's time. The output from the Manda mine alone is now about 1,100 tons daily, and when the new shaft is opened it is expected that it will exceed 2,000 tons.

"The following are the names of the different mines, with the date of opening, size and depth of shaft and average daily output:—

Name of Mine.	Date of Opening.	Dimensions of Shaft.	Depth of Shaft.	Average Daily Output
			Feet.	Tons.
Oura (incline) . . .	July, 1873.	10 by 6 feet .	4,820	530
Nanaura . . .	June, 1882 .	Diameter 14 feet . . .	237	520
Miyanoura . .	August, 1887.	18 by 12 feet .	176	650
Kachidachi .	Feb., 1894 .	18 by 12 feet .	391	950
Miyanohara .	March, 1896 .	Diameter 23 feet . . .	468	850
Manda . . .	March, 1903 .	41 by 12 feet .	896	1,100

"The coal is obtained by the pillar and stall system, the pillars being left 66 feet square, and the roads being about 10 or 12 feet in width. As the mines are worked at present about 30 per cent. of the coal is being extracted. The cutting is almost entirely done by hand, the average amount extracted by one miner in a day being about 2½ tons. This amount is slightly increased in the case of removing pillars. The roof is for the most part hard, and timbering is unnecessary in many places. Where necessary it is sustained by coggings,



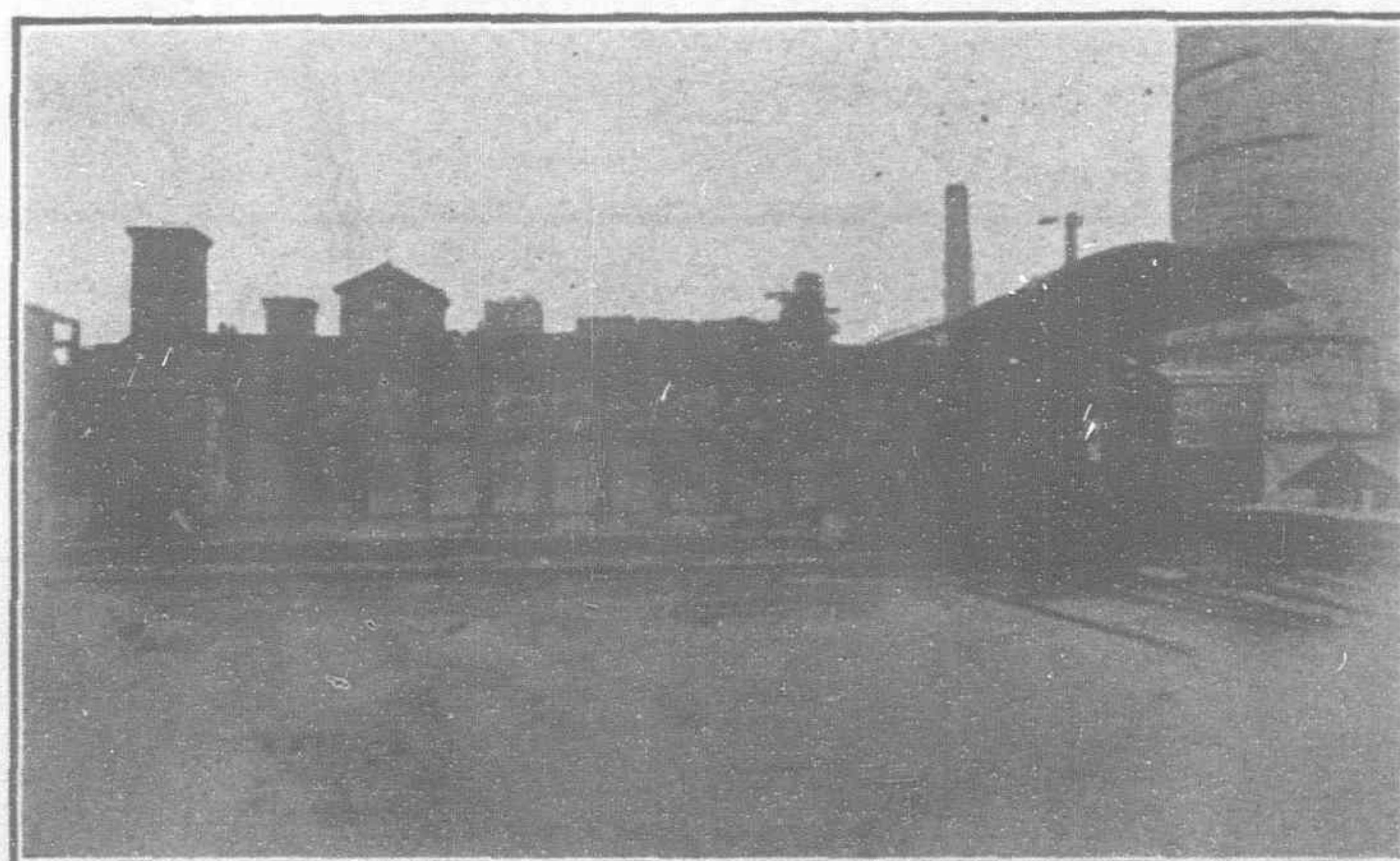
TAKASHIMA MINE

"Its heating value is 8,140 calories and the specific gravity 1.275. The coal is also recognized as a good gas-producer, the average per ton of coal being about 12 cubic feet. The amount of coke produced per ton is about 58 per cent., while the tar averages about 10 per cent. and is of excellent quality.

"As already mentioned the coke made from the coal from the 8-foot seam is the best produced in Japan. It is very hard and dense, and splendidly suited for use in blast furnaces. The analysis of the coke is as follows:—

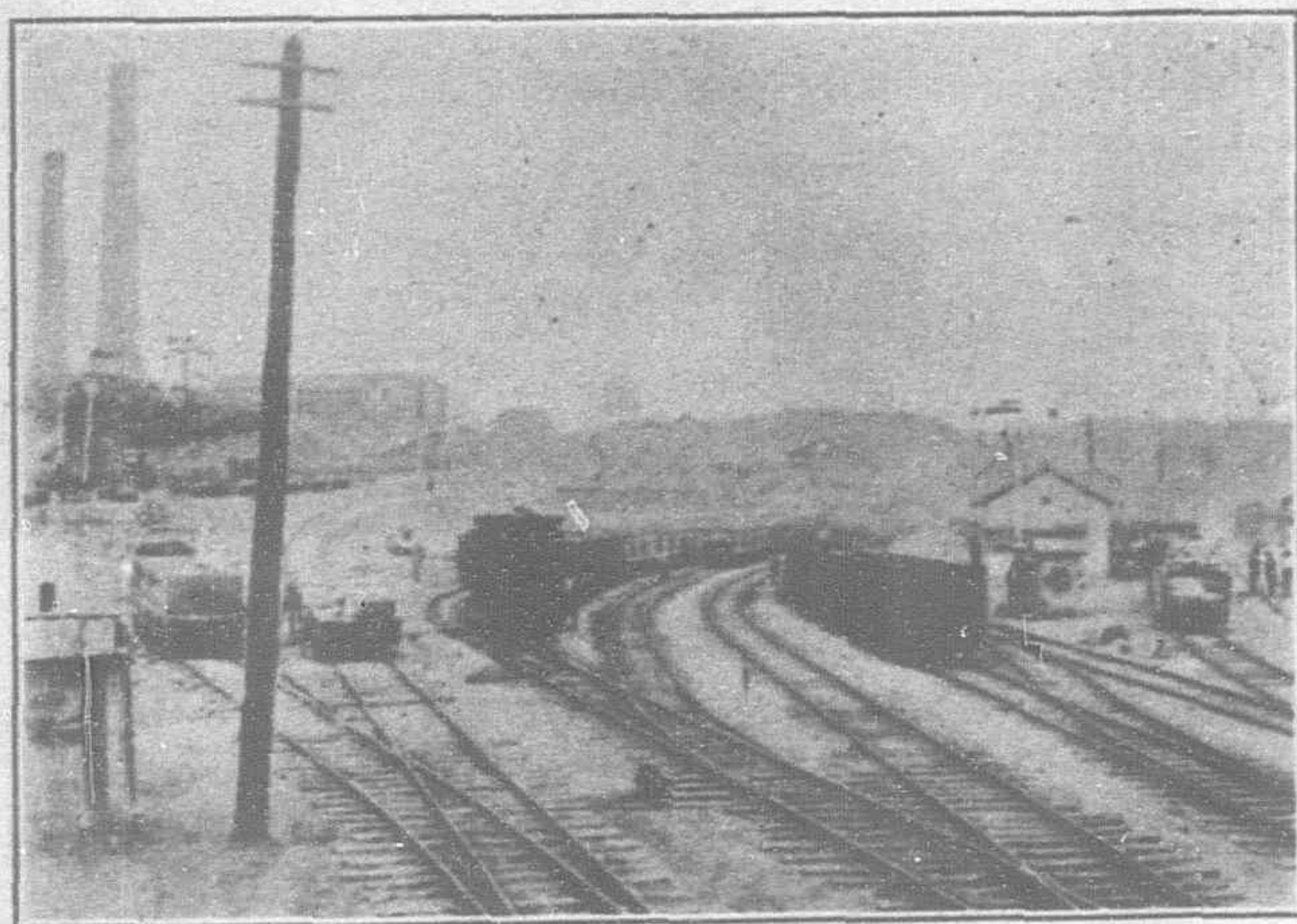
	Per cent.
Combustible matter.....	83.88
Ash.....	15.80
Moisture.....	0.32

Manda. Preparations are being made for a new mine still further to the south, the depth of which will probably exceed 1,200 feet.



COKE OVENS, MIIKE MINE

"Coke was first produced at the Miike mines in the year 1892, when four ovens for its production were installed for experimental purposes. Subsequently the success of the venture and the increased demand led to the installation of 12 more ovens in 1900, while in 1902 work was begun on 20 more. These are now in use, and the actual production is about 100 tons a day, necessitating the employment of over 200 men.



NANAWA PIT, MIIKE MINE

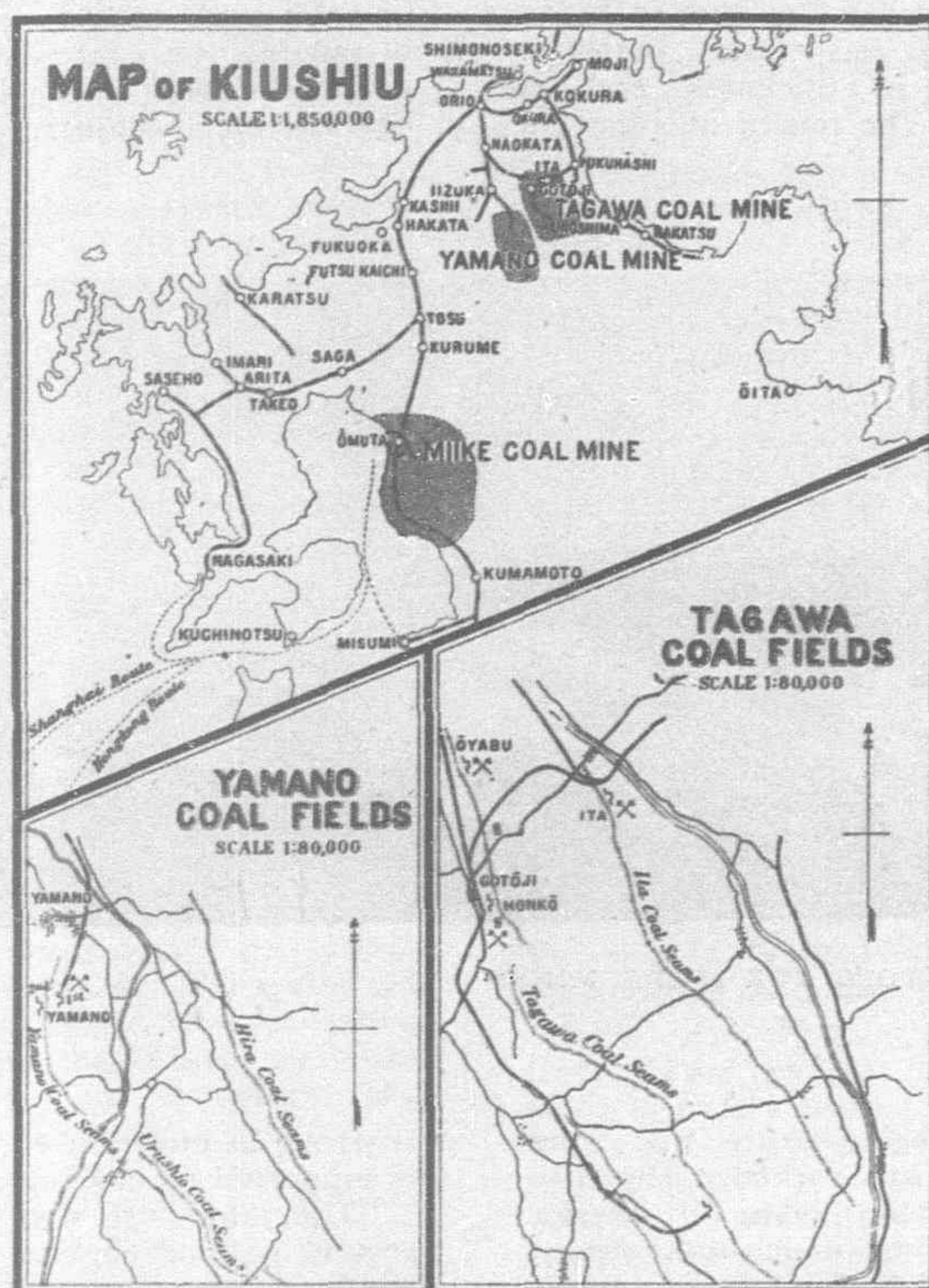
while steel and bricks are used in the main roads and workings of the mine.

"The greatest difficulty to be contended with is the enormous amount of water that percolates into the mines through the overlying strata. For every ton of coal obtained 12 tons of water are pumped from the mines, and during the rainy season this amount is doubled. The quantity of water to be pumped out increases with the depth, and at the Manda mine the quantity pumped out per ton of coal produced is about 24 tons. The aggregate amount pumped out per minute is about 1,350 cubic feet, or about 5,200 tons in the course of a single day, and nearly half this quantity is from the Manda mine.

"In order to cope with this enormous quantity of water pumps to the number of between 70 and 80 are at work, being operated by steam, electricity or hydraulic power. All the large pumping engines at the pit mouths are of the horizontal compound direct-acting type, fitted with Davey's differential gear.

At the Manda mine there are four of these engines, with a capacity of 40.3 tons per minute lifted 900 feet. They are described as probably the heaviest existing colliery pumping plant in the world.

"At the Miyanohara mine convicts from the prison in the vicinity are employed to the number of about 800. The convicts are kept apart from the ordinary miners and work in a different portion of the mine.



"To ventilate the mines there are five fan-engines at work, discharging from 70,000 to 200,000 cubic feet of air per minute. The mines are very free from firedamp, and open lights are used by the miners, except in a few parts of the Kachidachi mine, where safety lamps have to be employed. The principal roads and workings are all lighted by electricity.

"For the purpose of haulage tramways are in operation on most of the roads. There are also over 300 ponies employed for short distance haulage. Winding machines are installed at the various shafts for the purpose of raising the coal and lowering the men and trucks into the mines.

"Each mine, with the exception of that at Oura, is supplied with its own screening house, fitted with the latest screening apparatus. The output of the Oura mine is brought to the screening house at Nanaura. There is also a washing house, where the small coal is collected from the various mines and washed by means of jig washers.

"A workshop for executing repairs is to be found at each mine, while near Omuta there is a well-equipped workshop employing over 800 men for the execution of larger repairs.

"At Nanaura there is an electric generating station, but owing to the growth of the mines it has been found to be insufficient for the requirements, and a new station is being erected at Yotsuyama. This station, which will very shortly be completed, will have an aggregate electric energy of 1,000 kilowatts.

"The number of persons employed in the mines is about 3,200, of whom over 2,300 are miners and timbermen and the remainder carriers. About 40 per cent. of those employed in the mines are women. The miners work in two shifts of 12 hours each. Over 2,000 persons are employed above ground at the pit mouths, while the number of engineers and firemen is about 500. Each mine has a manager and a superintending engineer, who are responsible to the general manager and chief engineer respectively.

The average daily wages are as follows:—
Average Daily Wages
Paid to—
Men. Women.

	Sen.	Sen.
Miners.....	42	31
Outside workers.....	35	19

NOTE.—100 sen=1 yen=2s. 0½d. (approximately).

"The following table shows the output from the Miike mines for the years 1897-1906 inclusive:

Year	Output. Tons.
1897.....	623,444
1898.....	738,252
1899.....	708,501
1900.....	726,205
1901.....	890,863
1902.....	952,257
1903.....	1,097,176
1904.....	1,252,235
1905.....	1,311,038
1906.....	1,482,130

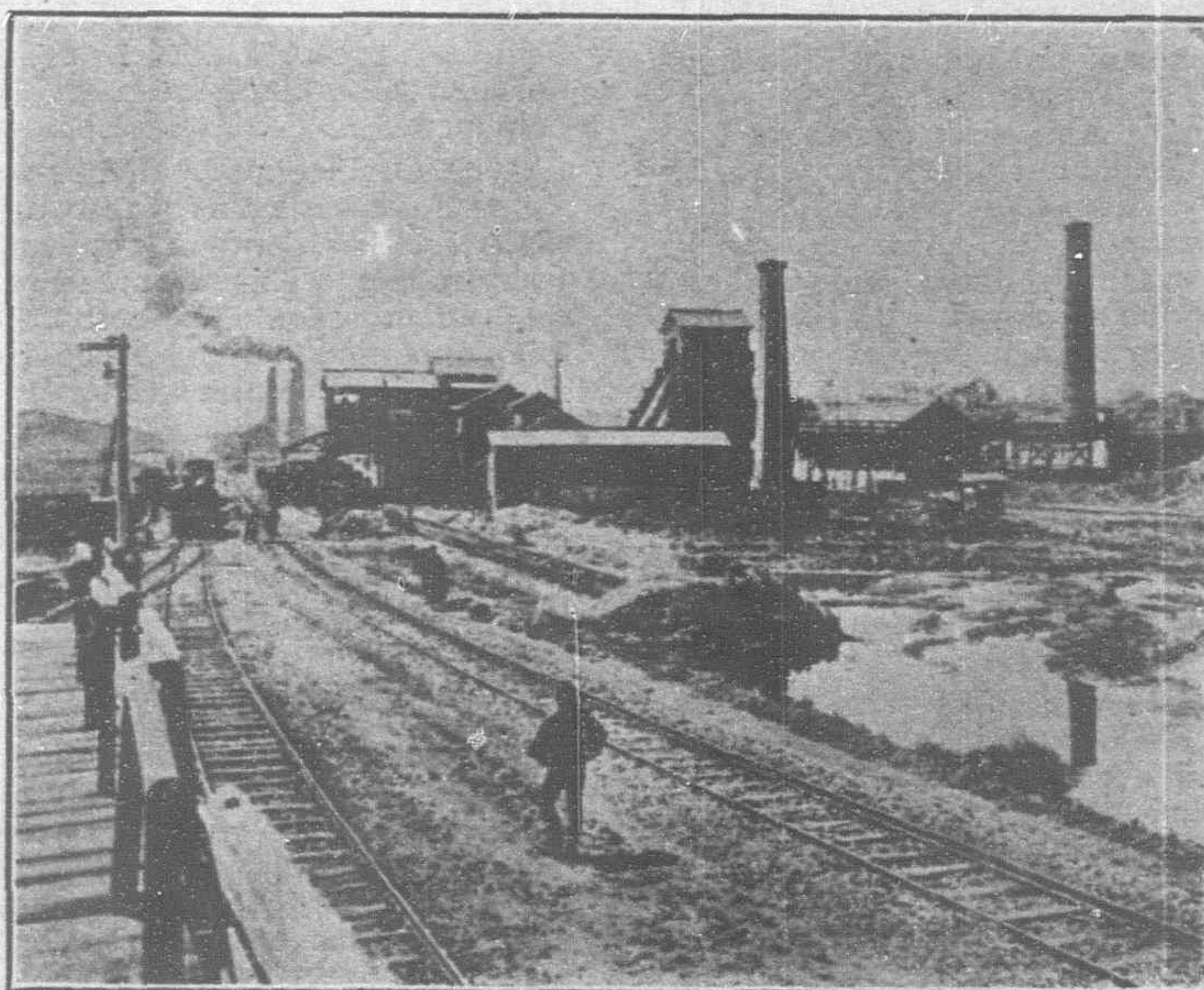
"About 10 per cent. of the coal produced is used in the working of the mines. The greater part of the remainder is conveyed from the pit mouths in the company's own trucks to the loading dock at Yokosu or to the station at Omuta; 16 miles of railway of the gauge ordinarily used in Japan are in operation and connect the mines with the Kyushu Railway from Moji to Yatsushiro.

"At present most of the coal is dumped into barges at the Yokosu dock, and from there conveyed to Kuchinotsu. These barges carry from 50 to 300 tons, and in fair weather can perform the journey of about 35 miles under their own sail in 24 hours. The company also owns tugs for the purpose of towing the barges to Kuchinotsu. The entrance to the dock at Yokosu is kept clear by constant dredging, the sea being very shallow close to the shore.

"The sale of the Miike coal is controlled by the Mitsui Bussan Kaisha (another branch of the Mitsui firm). This company collects the coal at Kuchinotsu, where it is either sold as bunker coal, or exported in the company's own vessels to Hongkong, India, China, etc.

"The following table shows the amount of coal dealt with at Kuchinotsu during the years 1904-06:—

Year.	Quantity of Coal Shipped.			Total.
	Abroad.	To Places in the Interior.	As Bunker Coal.	
	Tons.	Tons.	Tons.	Tons.
1904.....	612,763	45,252	138,031	791,046
1905.....	607,609	103,188	191,108	901,905
1906.....	518,551	69,256	151,378	739,185



WASHING PLANT, MIIKE MINE

"The Mitsui Company have erected dwellings at each of the mines for the benefit of the miners, the rent paid for the houses being merely nominal. There is also a system by which rice and other articles are sold to the employees of the company at fixed prices, varying according to the length of time during which they have been employed. There are also hospitals and schools for the exclusive use of the miners and their families.

"In order to avoid the transportation of the coal to Kuchinotsu the Mitsui Company are building a new harbor and dock near Yotsuyama. Work was begun in June, 1902, and it is expected that it will be completed by the end of June, 1908.

"The harbor is to be approached by a channel 2,000 yards long and 200 yards wide, having a depth of 18 feet at low tide. A wet dock is being built within the harbor, which will have

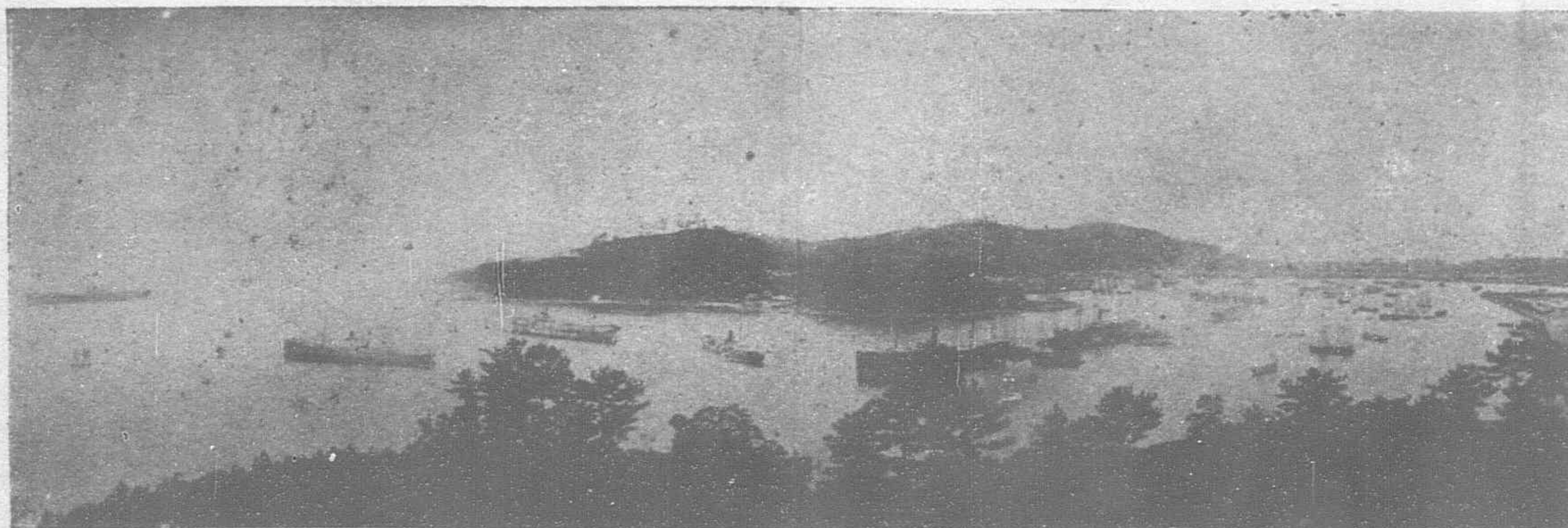
a depth of 26 feet at high neap tide. The area of the outer harbor is about 250 acres and that of the dock about 23 acres. There is also to be a dock for barges. On the land side of the dock a quay has been constructed capable of accommodating three vessels of 7,000 tons simultaneously. A railway connecting with the Manda line is to be constructed, and three coal-loading hoists are to be installed on the quay wall. By this means the coal will be loaded directly into the steamers, thus avoiding much

Faults are frequently met with in the strata, but if the displacement of the seams is not too great a tunnel is to be driven from one mine to the other, thus uniting the two islands.

"The principal workable seams are five in number. The first measures 8 feet, and was the one originally worked, though the work has now been abandoned. The second is 12 feet in thickness, but has three partings. The third is 5 feet in thickness and is likewise not worked. The fourth averages 18

feet in thickness, and being quite free from partings is the one most worked. The fifth seam measures 5 feet, but being of inferior quality is only mined to a limited extent for use as boiler coal at the mines.

"The coal produced from the Takashima 8-foot seam is the best in Japan. It is, like most of the coal produced in the country, bituminous and excellent for use in steamships. It is also suitable for the production of coke. It is, however, mostly used to supply the mail steamers calling at the port of Nagasaki, though a little is used in the country or exported to Hongkong, China, etc.



KUCHINOTSU HARBOR:—PORT FOR MIJKE MINES

breakage and loss of time. It is calculated that these loading hoists will be capable of working 7,000 tons of coal in the course of 24 hours. The completion of this harbor is likely to have a disastrous effect on the importance of Kuchinotsu as a coaling port. Vessels which now call at the port for coal will in future proceed to the new harbor at Mijike, and the extra time spent in making the journey will be amply repaid by the increased rapidity and ease of coaling.

"The Takashima Coalfields.—Though it is not certain at what date coal was first mined in the Island of Takashima, it is probable that small quantities were produced more than two centuries ago. Shortly after the beginning of the nineteenth century, however, the mines came into the possession of the Lord of Hizen, who, in 1867, associated himself with a Mr. Glover, an Englishman, and under his direction a shaft was sunk at Takashima and European machinery procured. This shaft was about 130 feet in depth and a seam of 8 feet was worked. In 1881 the concession was acquired by the Mitsu Bishi Company, the present owners. New machinery was introduced and modern methods of extraction employed, with the result that the output greatly increased, at one time exceeding a total of 1,200 tons a day. Since then, however, the work has declined considerably, and the present output at Takashima is only about 300 tons per day.

"The mines on the Island of Hashima were acquired by the Mitsu Bishi Company in the year 1890, and the output at present is about 350 tons a day.

"The mines are situated on the three Islands of Takashima, Hashima and Nakanoshima, lying about 7 miles from Nagasaki at the entrance to the harbor. The surface area of these islands, of which Takashima is by far the largest, is quite small. Hashima lies about 2½ miles from the former. The work on the Island of Nakanoshima has been abandoned.

"The mines themselves extend under the sea, and cover an area of about 2,775 acres. They are situated in the province of Hizen, and are included in the prefecture of Nagasaki.

"The seams, of which there are 13 in all, are found in the tertiary system, the overlying strata being principally composed of sand, shale, clay and slate. Generally speaking the seams slope from north-north-east to south-south-west, the dip varying from 15 to 13 degrees at the northern end, while at the southern end it in some places exceeds 50 degrees

feet in thickness, and being quite free from partings is the one most worked. The fifth seam measures 5 feet, but being of inferior quality is only mined to a limited extent for use as boiler coal at the mines.

"The coal produced from the Takashima 8-foot seam is the best in Japan. It is, like most of the coal produced in the country, bituminous and excellent for use in steamships. It is also suitable for the production of coke. It is, however, mostly used to supply the mail steamers calling at the port of Nagasaki, though a little is used in the country or exported to Hongkong, China, etc.

"The composition of the coal from the 18-foot seam is as follows:—

	Per cent.
Moisture.....	1.10
Volatile matter.....	36.95
Ash.....	2.01
Coke.....	59.84
Sulphur.....	0.10

"The specific gravity of this coal is 1.253.

"At Takashima there are two shafts. No. 1 shaft reaches a depth of 555 feet, and measures 14 by 10 feet. This shaft reaches at the bottom the 18-foot seam. No. 2 shaft (which, owing to an explosion in March, 1906, has been closed, but is to be re-opened shortly) reaches the lowest 5-foot seam and has a depth of 637 feet, its dimensions being 17 by 10 feet.

"At Hashima there are three shafts, only two of which are now worked. The original shaft, sunk in 1887, had to be abandoned 10 years later owing to an outbreak of fire, and has not been re-opened. The second shaft reaches a depth of about 900 feet.

"From the foot of the shafts the workings extend underneath the sea, and owing to the steepness of the beds a depth of 1,600 feet below sea level is reached in some places. In spite of this fact very little water penetrates into the mines, the quantity pumped out being about 60 cubic feet per minute at Takashima and slightly over 80 cubic feet at Hashima.

"As a rule the mines are fairly free from fire-damp, and the main roads are all lighted by electricity, while in places where this is impracticable the miners are provided with safety lamps.

"At Takashima there are two ventilating fans at work, with diameters of 18 and 24 feet respectively, the quantity of air taken in being 67,000 cubic feet per minute. At Hashima similar fan-engines are at work, the quantity of air taken in being nearly double.

"One of the greatest difficulties to be contended with at Takashima is the absence of

fresh water on the island. Sea water has to be used instead to feed the boilers, and salt is being produced from the water used for this purpose, the production from the two islands exceeding 5 tons per day.

"The coal is worked on the pillar and stall system, the pillars being about 60 feet square, and the roads 10 or 12 feet in width. The work of cutting the coal is done entirely by hand, as the softness of the coal renders the use of coal-cutting machinery unnecessary. The roof

is strong in most places, but where necessary it is supported by coggings. "The mines are well equipped with underground hauling engines worked by steam, and winding engines are installed at the pit-mouths for hoisting the coal. These engines are all of British make and of the latest type. The winding engines hoist one cage while lowering another, each cage having a single deck and space for two tubs.

"The number of workpeople employed at Takashima is 635, of whom 528 are miners. At Hashima the numbers are 824 and 738 respectively. Women and children are not employed underground, though they are engaged in sorting the coal and in other ways at the pit mouths.

"The average quantity of coal cut per man in a day is 1¼ tons. The miners are paid by the number of tubs they cut, the price varying from 35 to 15 sen according to the hardness or otherwise of the working face. The average wage of a miner is from 75 to 80 sen per day. Outside workpeople receive from 50 to 55 sen a day. Women are only employed above ground, receiving from 18 to 28 sen a day.

"The men work in two shifts of 12 hours each, while the outside workers have a day of 10 hours.

"Schools and hospitals have been erected by the company for the benefit of the miners, and practically the whole population of the islands (about 2,000 at Takashima and 3,000 at Hashima) is dependent on the company, as the soil is not fertile. A small steamer provides daily communication with Nagasaki.

"All the coal produced from these mines is loaded into large junks, carrying about 100 or 150 tons each. These proceed under their own sail to Nagasaki, whence the coal is loaded direct into the steamers or exported to the various consumers. The selling price of large coal varies between 9 and 10 yen per ton, and that of small coal between 6½ and 8 yen per ton.

"The following table shows the output of the Takashima mines for the four years 1903-06:—

Year.	Quantity. Tons.
1903.....	159,259
1904.....	231,429
1905.....	205,658
1906.....	147,342

"The great falling-off in the production for the year 1906 may be attributed to the closing of shaft No. 2 at Takashima owing to an explosion in March of that year.

"In addition to the mines described in detail above, there are also coalfields covering a considerable area in the province of Hizen, of which Takashima appears to be an outlying member. The total area exceeds 20,000 acres, and the mines are situated in various parts of this district. None of them are very large, but several are of considerable importance, notably those of Yoshinotani and Ochi, the latter belonging to the Mitsu Bishi Company and producing an excellent coal. Yoshinotani has the largest annual production, though there are no mines in the district with an output exceeding 200,000 tons per annum. The port of the district is Karatsu, whence most of the coal is exported. The conditions of labor, wages, etc., are generally the same as at the collieries in the other districts of Kyushu.

"In 1905 the total output of the mines in this district was slightly over 1,200,000 tons. The following table shows the output of the principal mines during the year 1903-06 inclusive:—

Year.	Quantity.
	Tons.
1903.....	705,666
1904.....	756,791
1905.....	830,398
1906.....	831,406

"In the Island of Amakusa there are several mines producing small quantities of anthracite. They lie on the north-east coast, and cover an area of about 1,000 acres. The principal mine is at Shiki. The area of the concession is about 600 acres, and the colliery employs over 200 persons. The output during the three years 1903-05 was as follows:—

Year	Quantity.
	Tons.
1903.....	16,099
1904.....	17,389
1906.....	14,927

JAPAN'S COAL OUTPUT

The total output of coal in Japan, says the *Moji Shimpō*, during 1907 was 13,716,488 tons, of which 11,126,438 tons, or nearly 81 per cent, were mined in Kyushu. The following figures show the output in tons of the Kyushu collieries for the past nine years:—

1907.....	11,126,438
1906.....	10,302,603
1905.....	9,370,481
1904.....	8,403,465
1903.....	7,280,552
1902.....	7,588,332
1901.....	7,200,545
1900.....	6,115,366
1899.....	5,626,411

There are ninety collieries in Kyushu which each produced more than 30,000 tons last year; 47 from 10,000 to 30,000 tons each; 28 from 5,000 to 10,000 tons; and 308 which produced less than 5,000 tons each. The Kyushu collieries are distributed as follows:—

Fukuoka-ken.....	208
Saga-ken.....	133
Kumamoto-ken.....	1
Nagasaki-ken.....	142
Okinawa-ken.....	2

There are no coal mines in Miyasaki-ken, Oita-ken, and Kagoshima-ken. The total area of the collieries in Kyushu is 277,218,402 tsubo, of which 19,621,200 tsubo are in Nagasaki-ken.

PHILIPPINE FREE TRADE PETITION

A petition signed by over 200,000 asking the people of the United States for free trade between the islands and America was made the subject for a demonstration on the Luneta, Manila, July 4th, when many signatures were secured publicly, before the document was transmitted to Washington. Mr. Harold M. Pitt, manager of the Los Baños Improvement Co., who has been to the fore in the campaign for free trade, and Daniel O'Connell, financial secretary of the Manila Merchants' Association, took the initiative in this movement on this occasion. The petition reads in part as follows:—"Since the 13th day of August, 1898, the

affairs, economic and political, of the Philippine people, have been under absolute control of the government of the United States.

"We recognize the fact that, during the ten years this relation has continued, much has been accomplished for the advancement and uplifting of this race and the development of industry in these Islands.

"We are not insensible to the benefits of the great public school system; nor of the fiscal system; nor of the system of railroads and public improvements that have been inaugurated by and with the energy, fidelity and genius of the American people. Yet, while the United States has done so much for us, so much that will make for the security and stability of prosperity in the future, there is one thing that could have been done which, if done, would have prevented much suffering and disaster that has overtaken a large body of our agricultural population. We refer to the removal of the tariff barriers of the United States from products of the Philippine Islands.

"While sections of the Archipelago that yield hemp, copra and rice have continued during recent years under a fair measure of prosperity, the country has lacked the stimulus of capital, and the produces of many articles, notably sugar, have labored under conditions that precluded success; and during the present year the low prices that have prevailed for hemp and copra, together with a partial failure of the rice crop, have prostrated industry and precipitated an acute economic crisis.

"We earnestly direct your attention to these facts: That while it is true that labor in our fields is poorly paid, there is good reason why it cannot be better paid. The same law that applies to and controls other industries applies also to the agricultural industry here. If the cotton trade languishes, the wages of your mill operatives are reduced; as business improves wages are advanced; and it would be just as reasonable to tell our hemp, sugar and tobacco planters that if their business is not paying them, they must turn to wheat growing or the raising of cotton, as it would be to tell your cotton mill owners or your cotton planters that when the cotton business is depressed they should turn to making iron and steel, or to raising sugar beets.

"We do not charge that the government of the United States is responsible for the unhappy conditions of industry in these Islands, but we do maintain that as territory belonging to, controlled by and dependent upon it, a moral obligation is imposed that may not be justly disregarded, to assist in every possible way the material interests of the people here.

"We have been made to witness the splendid development and evident prosperity of Porto Rico since that Island has enjoyed the advantages of free trade with the United States, and we naturally feel that if it were justice to so legislate in the case of Porto Rico then full justice has not been done the Philippines.

"We see that Porto Rico's exports increased under free trade with the United States, from \$8,583,987 in 1901, to \$26,959,505 in 1907; and that her imports from the same period increased from \$9,366,230 to \$29,267,172, a total increase in her external commerce in six years of \$38,267,480. And of the imports into Porto Rico in 1907 the United States contributed nearly \$26,000,000, or 88 per cent, while of the exports they took \$22,000,000, 80 per cent. And those purchases from Porto Rico were entirely of articles that the United States would have been under the necessity of importing from foreign countries had they not been obtained in Porto Rico, and that, too, without receiving such advantages in return as they received in Porto Rico for their own products.

"We believe that we can pledge to you for the Philippines an equal return in commerce, in proportion to population, if you will give to us the same legislation that was enacted in the case of Porto Rico, and where the million Porto Ricans purchase twenty-five million dollars' worth of goods in the United States, eight million Filipinos will, within ten years from the enactment of a free trade law, be purchasing two hundred million dollars' worth.

"We, therefore, earnestly petition the people of the United States to influence the United States Congress to enact legislation that will give to the Philippine Islands equal trade advantages with Porto Rico, that the economic troubles with which we are afflicted may be removed, and these Islands once more be brought to a condition of prosperity and happiness."

* MINING IN JAVA

Mr. J. W. Stewart, British Consul, reports for 1907:—

Tin.—Shipments of Government tin from the Island of Banka were on a slightly larger scale than in 1906, 10,945 tons being exported in 1907 against 9,807 tons in the previous year.

The quantity of private tin shipped was 2,432 tons as compared with 1,935 tons in 1906.

AUCTIONS OF BILLITON TIN, HELD AT BATAVIA DURING THE YEARS 1906-07

DATE OF TENDER	Quantity in tons.	Average Price Per ton.
1906		
January 3.....	123	£ s. d. 156 8 10
February 7.....	123	161 9 6
March 7.....	123	158 0 7
April 4.....	123	165 11 7
May 2.....	181	176 4 0
June 6.....	184	174 4 11
July 4.....	184	172 8 6
August 8.....	184	177 2 2
September 5.....	187	178 5 2
October 3.....	184	187 19 10
November 7.....	184	190 2 11
December 5.....	184	190 18 0
1907		
January 3.....	184	£ s. d. 184 0 9
February 6.....	184	186 0 10
March 6.....	186	186 0 10
April 3.....	184	178 0 2
May 8.....	186	181 6 1
June 5.....	186	176 7 0
July 3.....	186	171 12 3
August 7.....	184	171 10 1
September 4.....	184	161 0 8
October 2.....	186	152 18 5
November 6.....	186	156 17 9
December 4.....	186	128 10 19

PETROLEUM.—The production of Java oil amounted to 1,655,331 cases as against 1,994,689 cases in 1906.

Mr. du Pon, British Vice-Consul at Balikpapan, reports:—

The industry of the place is oil (petroleum) and its products, which is now carried on by the Bataafsche Petroleum Maatschappij, this company being the result of the recent amalgamation of the Royal Dutch Oil Company and the Nederlandsch Indische Industrie en Handelsmaatschappij.

The new company is now under Dutch administration, with their head-quarters at the Hague.

The large oil refinery here deals with about 450,000 tons of crude oil per annum.

GOLD.—Two new gold mines in Borneo were floated during 1907—Sintoeroe and Moewang. The results obtained from both of these were unsatisfactory owing to many troubles from which Bornean gold mines are even less exempt than others in their early days. Towards the end of the year, however, much richer ore was met with, and the management look forward confidently to better results.

The Redjang Lebong mine now ranks as the richest mine for its size in the world—that is, there are no other mines crushing as much as 5,000 tons of ore per month of a value of more than 1 oz. of gold per ton. It has also the unenviable distinction of being one of the most expensively worked mines of its size in the world. Notwithstanding the privileges it enjoys of having waterpower and very cheap labor, the treatment of its ore costs £1 16s. per ton, while the Transvaal mines generally, though denied these privileges, have reduced their expenses to below 18s. per ton.

COPPER.—There is a Dutch company prospecting for copper in Timor with apparent success, as samples containing a good percentage of copper have been received for analysis.

THE DEVELOPMENT OF SHIPYARDS AND SHIP-BUILDING INDUSTRY OF NIPPON

*BY HIRATA TAKATOKI.

The growth of the mercantile marine of the world since 1900 is not remarkable,—it is almost unbelievable, it is astounding.

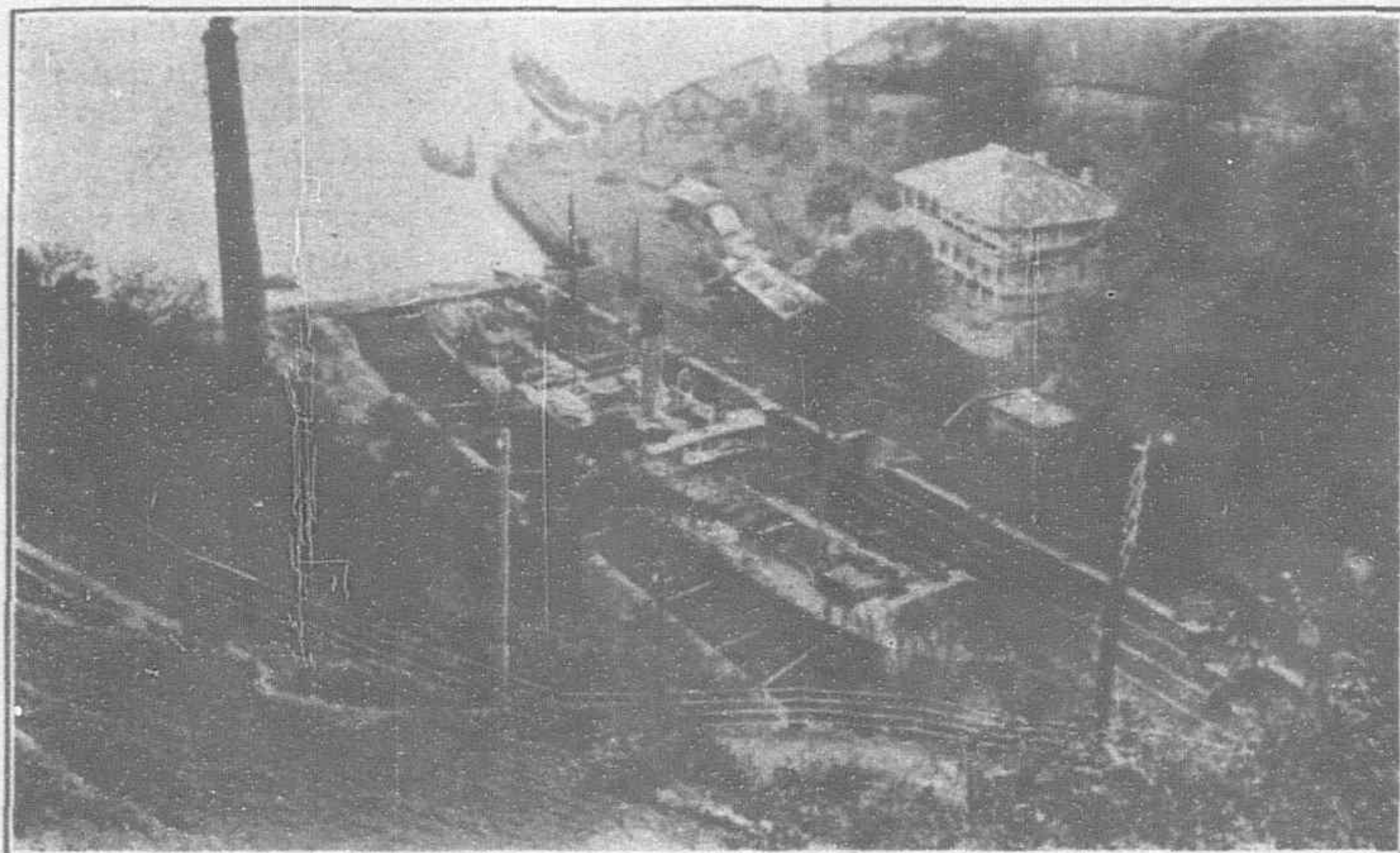
Great Britain in 1900 built 696 ships of the aggregate tonnage of 1,374,585. In the same year the United States built 154 vessels, the total tonnage of which amounted to 207,345. Germany built 98 vessels of the aggregate tonnage of 227,898. France 55 ships of 69,933 tonnage. Nippon in the same year, built 101 vessels of a total tonnage of 21,766.

The ratio of the increase of the ship-building industry is a little different; it is about 500 per cent.

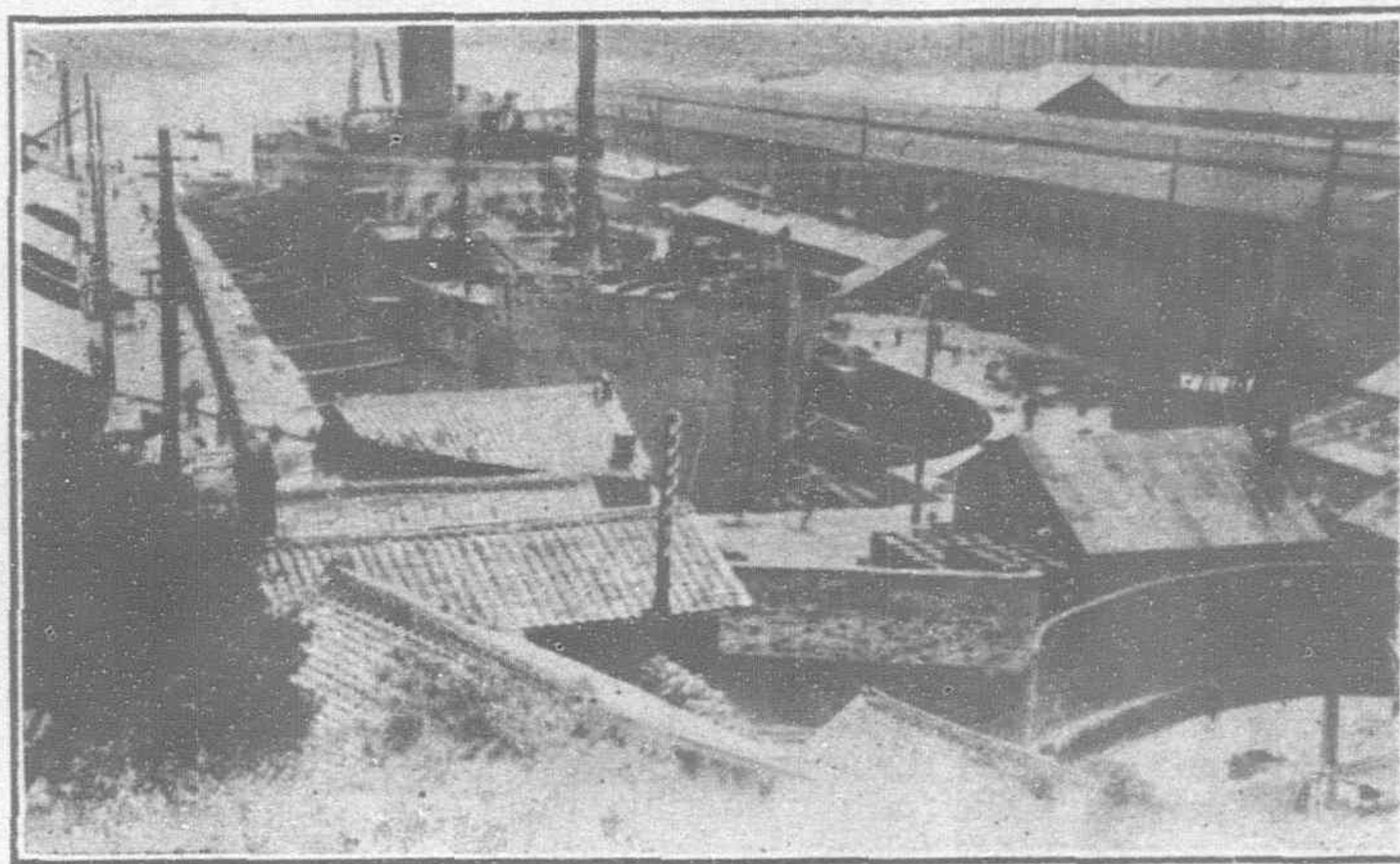
This, then, is the place to which the ship-building industry of Nippon has advanced. Beside it, the scandalous speed at which the taxation of New York City property is said to be climbing heavenward looks like a snail's pace.

There are many reasons for this stupendous growth in the ship-building enterprises of the

eastward advance of Russia over the Siberian snows? What about the ever eastward march of England through Egypt, Persia, India, Burmah, Australia, and out upon the South China Sea at Hongkong? What also about the French crowding into the Empire of Cochinchina and dominating the treasure house of the South China? From the West and from the East, therefore, the world's center seems to be converging on what has been known as the Far East.



THE NO. 2 DOCK OF MITSU BISHI CO., NAGASAKI



THE NO. 1 DOCK OF THE MITSU BISHI CO.

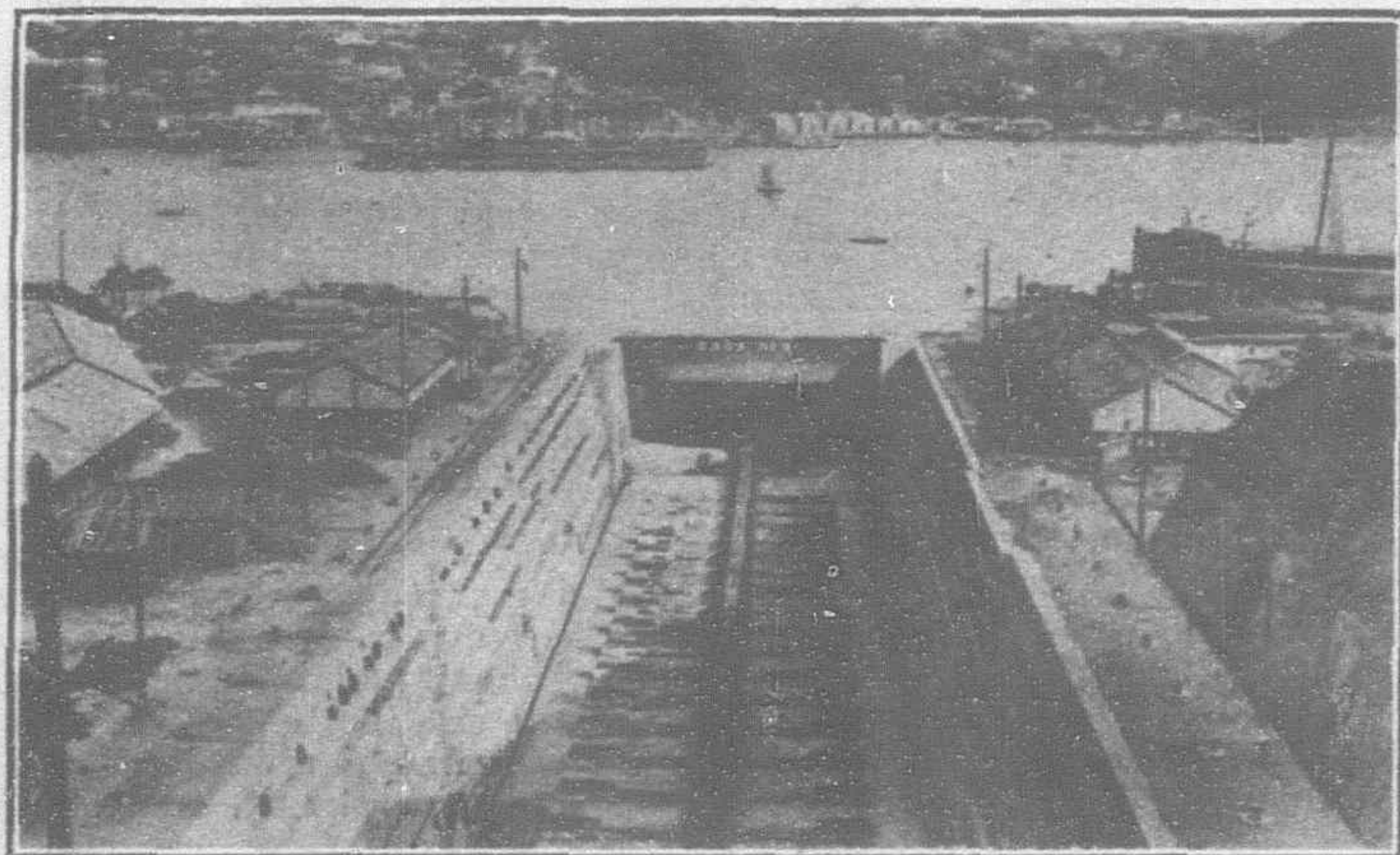
In 1907, the number of new vessels built by Great Britain and her colonies aggregated 2,014, amounting in tonnage to 1,845,305 tons. The United States built 177 vessels of the aggregate tonnage of 454,713. Germany 507 vessels, with a total tonnage of 321,372, and Nippon 148, with a total tonnage of 127,521. France 52 vessels, with an aggregate tonnage of 113,345.

The growth since 1900, in the case of Great Britain, shows the increase in vessels of 1,318 and in tonnage of 570,720. The United States, in 1907, shows the increase in the number of ships built over those of 1900 by 23, and in tonnage 247,368. As for Nippon, she built in 1907 only forty more ships than in 1900, but mark the difference in the tonnage of the ships she built. She built 105,255 tons more than in 1900. Here is a difference.

world. Taking the more important few, let us say first, that the center of the world's civilization in its ever Westward shifting, has actually sailed out of the Mediterranean, sailed over the Atlantic, and looks very much as if it has made the United States its temporary home. From the restlessness of it, also with its face toward the West, one is tempted to say that it will be swimming across the Pacific within a very short time. This shifting of the world's center of civilization, commerce, finance and political interests, naturally carried with it a tremendous activity along the development of resources which had remained untouched, and the development of resources in virgin territory forces, willy-nilly, the increase of transportation facilities. The construction of railways has brought about a new era

In the period that straddled the years of grace 1904 and 1905, in which history was made at a rapid pace from Port Arthur to Mukden, from the Yellow Sea to the Strait of Korea,—one Eastern power, for the first time, joined the household of great powers. The rise of Nippon and the wakening of China, the coming of the continent-island of Australia to her own, made the extreme East the center of the world's stage.

And the birth of the New East brought the world's greatest ocean into play, and for the first time in the history of mankind. Small wonder, therefore, that this period marks a new era in the history of the ship-building and mercantile marine of the world in general, and of Nippon in particular.



DOCK NO. 3 MITSU BISHI CO.



THE NO. 1 DOCK OF THE MITSU BISHI CO.

In other words, in terms of tonnage, Nippon built in 1907 about five times as much as she did in the opening year of the twentieth century,—five times.

The rise in living expenditure is causing a great deal of comment. But after all, it has only risen about 30 per cent at the most, within the seven years under review.

*In *The Pacific Era*.

for land transportation,—and a more striking, if not newer, period for water transportation.

With the shifting of the world's centers Westward, we seem to be tiptoeing now on the threshold of what might be called the Pacific era. The glories of the Atlantic are those of a sunset glow, and already a new sun is above the horizon of the new East. The course of the star of the empire of the school-boy is merely telling us a half of the story, for what of the

A number of minor causes there are, also. The policy of great powers, and specially of the Nippon government, is to encourage the creation of merchant marine as an auxiliary to the navy. Subsidy, bounty, mail contracts, and every manner of government assistance, have entered into the up-building of the ship-building and merchant marine enterprises.

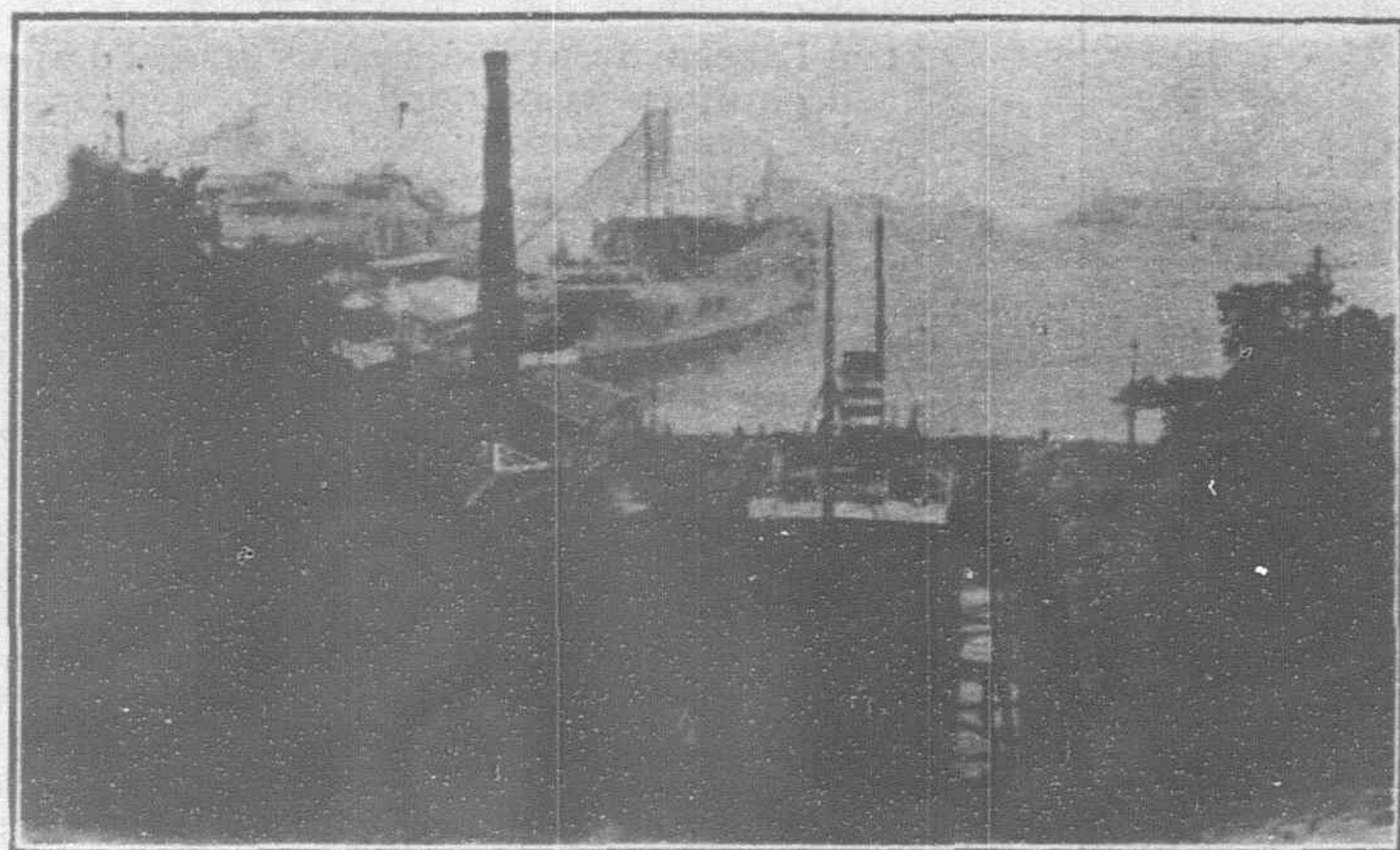
Another cause: The passenger traffic of the steamship companies all over the world have

abandoned the method of competing one against another, through low prices. Competition, especially in over-sea passenger transportation business, is to-day carried on almost entirely through superior accommodations, by means of superior construction of ships, through the attainment of great speed, through the elegance and furnishings of the cabins also, and this method of competition for trade gave a tremendous impetus to the construction of more imposing ships of greater tonnage.

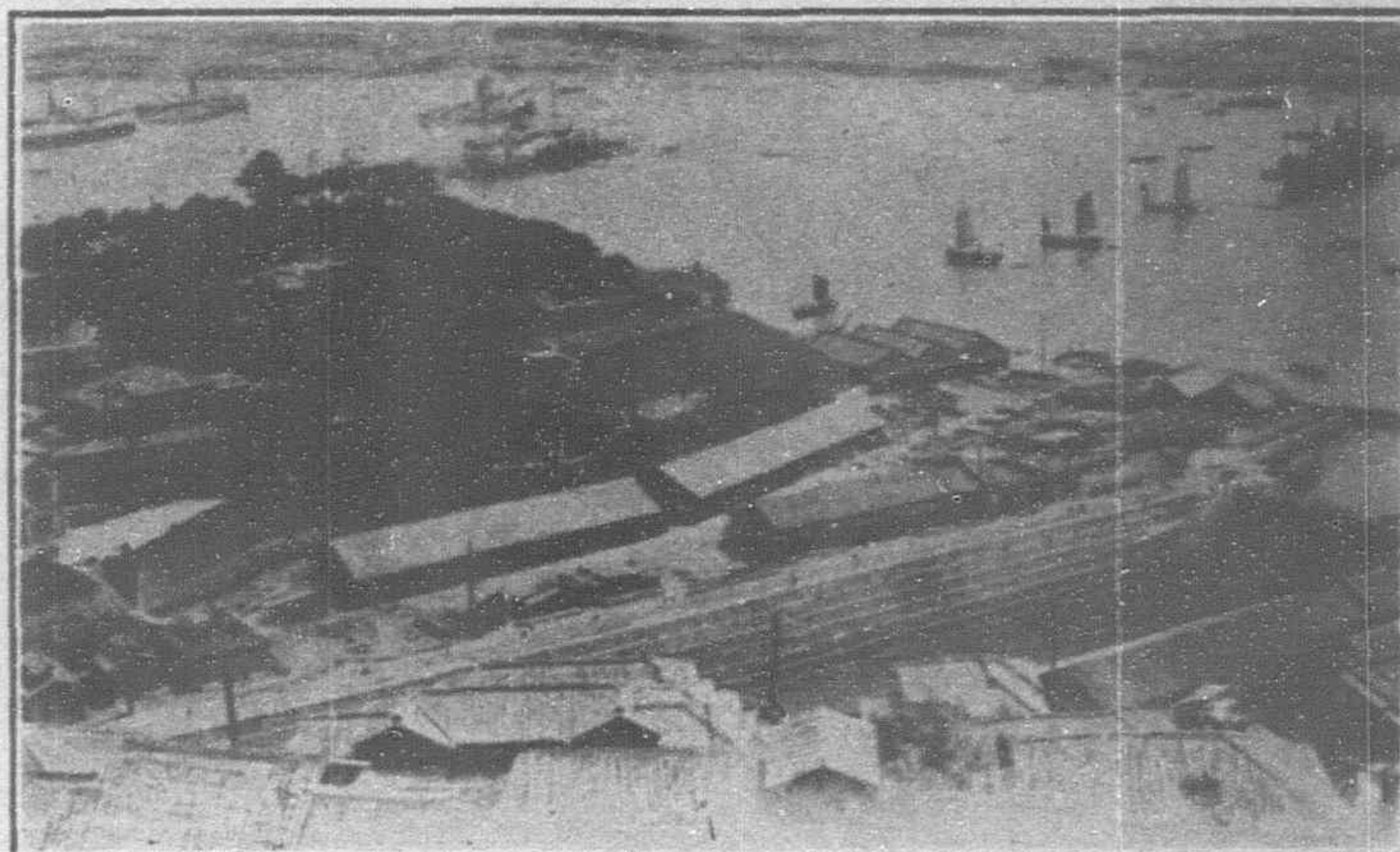
Still another: By no means the least of the chief reasons for the great advance of ship-building interests in the world, was the policy adopted by Germany of late. On a fine day Germany quaffed a heady wine, and swore solemnly that she shall in the future dispute the supremacy of Great Britain as the

upon the one-mast wooden junk as quite satisfactory and sufficient unto their far-sea dreams. It was in those days that the government of Holland presented a toy steamer to the Shogun. It was christened with the poetic name of Kwanko-Maru. When it was damaged, the necessity of establishing a repair shop arose, and so it came to pass that a Hollander called Harde, who at the time was engaged in a famous Dutch factory at Deshima, was engaged to serve under the Shogunate and establish a new workshop fitted with sufficient machinery, for the purpose of repairing the small "Ship-That-Sees-the-Light." It was in the second year of Ansei (1855), and this little workshop was the forefather of the present Mitsubishi Dock, at the inlet of Aku. It was exceedingly modest, this dock, in the days of the

tonnage of Nippon began to grow. Naturally the facilities for repair and construction of steamships increased as the days went by. The increase in the construction and repair of steamships compelled the Mitsubishi people to rebuild their workshops. They purchased another dockyard which was called Kosuge, and finally succeeded in establishing the present Takami dock. But the ship-building work of the Mitsubishi Dockyards in those days was not at all pretentious. The largest vessel they built in those days was a wooden vessel of 1,500 tons. This vessel was built in the days when the present Prince Ito was the Minister of the Department of Construction, and when Mr. Otori Keisuke, the present Baron Otori Keisuke, was the Chief of Bureau of Construction. In those days the Mitsubishi Dock-



THE MITSUBISHI DOCK NO. 2, NAGASAKI



THE NO. 3 DOCK OF THE MITSUBISHI CO.

ship builder and ship owner and mistress of four seas. And the aggressive policies of Germany in commanding the over-sea transportation trade on all the waters of the globe, inaugurated what might be called a race in ship-building and the maintenance of merchant marines between the two very great powers of the world.

Let us recall the history of the ship-building industry of Nippon in the picturesque story—with more than a touch of the old time feudalism—of what is now known as the Mitsubishi Dockyard Company.

Mitsubishi Dockyard.—Where the Pacific loiters down the evergreen aisle in its Sabbath peace and dignity, into perhaps the finest harbor in the Far East, called the Bay of Nagasaki, along the water front covering about two and one-half miles, stands to-day the dry docks and workshops of the Mitsubishi Dockyard Company. Two dry docks of the company have done a great deal of work in the past. The ships belonging to the Hamburg-American Steamship Company of over 16,000 tons were repaired there. It was there that the Dakota and Minnesota of Mr. Hill's line were wont to receive such attentions as they needed.

The first of these docks is situated at a point called Azatagami, and the second is at the inlet of Azaaku. The third dry dock is in course of construction. It is being built at a point called Azahachikenya; it is to be the greatest dry dock in the Far East.

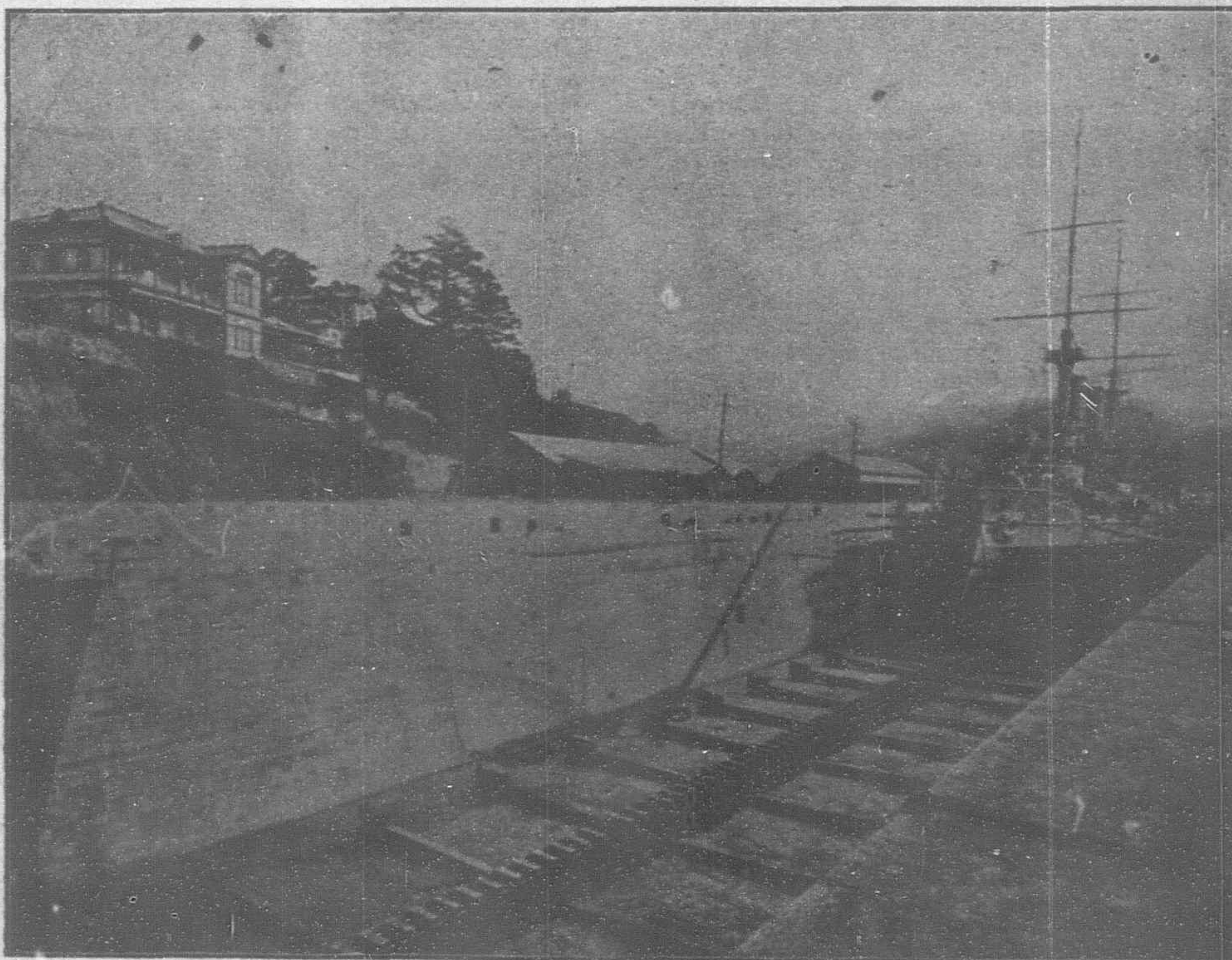
As with so many great things, the Mitsubishi Dockyard Company began in a very small way, and the beginning of it belongs to an ancient history, as the new order of things in Nippon goes. At first the dockyard was inaugurated by the Tokugawa Shogunate.

In the declining days of the Tokugawa Shogunate, Yokohama and Nagasaki were the two harbors which were opened for foreign commerce before all the rest. The appearance of many a stately ship from abroad at these two harbors was the first inspiration that gave restlessness and dissatisfaction to the shipping trade of Nippon. No longer would they look

Shogunate. It was entirely too small to claim even a passing glance of the ship-building industry of the present day. The entire duty of this dock in the days of the Shogunate was simply to repair the Kwanko-Maru, and one or two other still smaller steamboats, which happened to be in the Harbor of Nagasaki. After the fall of the Shogunate, and when the Meiji Government came to power, the steamship

yard still remained under the management of the Nippon Government, and you can see the souvenirs of those days in the conventional chrysanthemum crest, which the Government used to put upon all its workshops everywhere in those days, still retaining its imperial dignity on the stone fences of the Tategami dock.

Now the Government enterprises, then as now, proved quite expensive without any



MITSUBISHI'S NO. 3 DOCK (714 FEET ON BLOCKS) WITH H. I. J. M. WARSHIP "IKI" ON THE STOCKS

perceptible profit. It was therefore on the 17th of July, 1884, that the government-owned dockyard was leased to Baron Iwasaki Yataro, who was the President of the Mitsubishi Co. at the time, and for some years the Mitsubishi Company tried to manage the docks under the lease. The lease, however, did not prove, either to the government or to the Mitsubishi people, satisfactory. It prevented the Mitsubishi interest from exercising the full measure of its judgment, did not afford it the liberty of constructing new dockyards, or expanding

of the world. As the years went by the pressing demand for the increase of shipping facilities in the far eastern seas grew apace; Mitsubishi ship-building enterprises had no lack of work. It was in 1894 that the Mitsubishi Company felt an absolute necessity of extending their facilities in building ships, and at last succeeded in extending the length of the Tategami Dockyard to 523 feet. Thus the first dockyard of the present time was established. At the same time, it felt the necessity of building a new dock at the inlet

to the gathering place of materials for the construction of ships. The general idea of the size of these different workshops could be gained by saying that the woodworking shop alone measures 468 feet by 80 feet. Both at the inlet of Aku and at the Tategami, they have their own plant for generating electricity for the use of the shops, as well as for lighting purposes. From there, also, is furnished all the compressed air that is used all over the workshops. These two docks alone at the present time, afford a facility of building 20,000 tons of ships per year.



PART OF THE MITSUBISHI'S SHIPBUILDING YARDS

the old ones. So, three years later, in 1887, the Government at last sold the property to the Mitsubishi Company. This was the time when Nippon was entering upon a new life. The country was about to be given a new constitution. All the industrial, economic, financial life of the country, as well as its political activities, were preparing themselves to receive new inspiration. One of the great necessities, the lack of which the country felt bitterly, was the ship-building facility. Answering therefore to the wide-spread demand for the construction of new ships, in 1889, the Mitsubishi Dockyard contracted and succeeded in building the steel steamers for Osaka Shosen-kaisha. They were the *Kisogawa-Maru*, and the *Chikugogawa-Maru*, and the *Shinanogawa-Maru*. These steel steamers were built in the present Tategami shops and dock. By that time the Mitsubishi Company had managed to acquire a certain amount of machinery and tools which were essential for the proper construction of a ship, but compared to what it is today, it was indeed in its infancy. And indeed, it should hardly be dignified by the name of a dockyard; it was simply a ship-building shop which tried its best, with limited facilities.

The inevitable contest over the command of the four seas which had been in full play in the Mediterranean and the Atlantic, was beginning to invade the more distant seas. The waters of the Far East were then just beginning to feel the first hint of this active and strenuous struggle. Nippon was wakening in those days, without even pretending to be one of the great actors of the world-drama. Still, she was compelled, in a more or less degree, to take her part in the world movement, in doing what she could in augmenting the mercantile marine

of Aku. It was built with the length of 371 feet, and this is the second dock of the Mitsubishi Company of the present time. With the establishment of this second dock, the Mitsubishi Company established also a number of workshops surrounding it. Also the company increased the number of workshops which specialized in the manufacture and construction of different parts of a ship, and enlarged the scope and capacity of their work in every line. It was in those days that the Mitsubishi Company established different departments of machinery, of putting different parts together, a workshop for filing purposes, boiler shops, and in addition to these they established a special factory for the manufacture of sails, for the manufacture of cast iron articles, for the wooden workshop, enlarged and re-built a number of blacksmith shops, and the electrical department. It was just about this time also that they began to use electricity for motive power. Also, they installed a three-legged steel crane which has the capacity of lifting a hundred tons, and connected different workshops and different departments of the dockyard with rail. This gave an entirely new aspect to the dockyard, also a new scope.

A little later on, they leveled the hill back of the Tategami Dock, and gained a good deal of space along the water front by filling in the shallow portion of the inlet near the shore, and upon this new-made ground, they placed a number of new workshops, such as machinery and blacksmith shops, and bath. It was upon this site also, that they housed a new department of the naval architects, for the drawing of ship plant, and so on. Also they filled up about 3,000 tsubo (one tsubo equals about four square yards) in the portion along the reef near the shore, and devoted this space

MESSRS. WHITEAWAY, LAIDLAW & CO., LIMITED

A company has been formed with a capital of £600,000 for the purpose of taking over the various stores known as Messrs. Whiteaway, Laidlaw and Co. and Messrs. Laidlaw and Lake, and carry on work as general drapers and outfitters as now and add to it insurance work, trust, banking and agency business, the receiving of money and valuables for safe custody, the providing and conducting of refreshment rooms, etc., and the undertaking of any other work that might be found advantageous at any moment. The vendors will take up 200,000 ordinary shares and 100,000 preference shares, fully paid up, in part payment of the purchase price.

With the prospectus is an illustrated supplement giving photo blocks of Messrs. Whiteaway, Laidlaw & Co.'s freehold and leasehold premises in several parts of India, Burma, Colombo, the Straits Settlements and Shanghai. There are 24 such places of business, and in every case the buildings are very large and artistically put up and show the enormous business that is being carried on under the name and title of Messrs. Whiteaway, Laidlaw & Co.

PEKING WATERWORKS

Messrs. Arnhold, Karberg & Co. have secured the contract for the construction and installation of the system of waterworks for Peking. The contract provides for the completion of the work by 1910 and the amount involved in the vicinity of half a million taels.

The supply for the system will be secured from the Hsi-Hsia-sun Ho River, directly outside the Anting Men Gate and which is supplied by two tributaries, the Sha Ho and the Ching Ho, which have their source in the Pei Shan and Hsi Shan respectively.

The control of this system is in the hands of The Peking Waterworks Co., which has been sanctioned by the Board of Communications at Peking, and has a capital of \$3,000,000. The shares were offered for sale in Peking, Tientsin and Shanghai, and no foreigner may participate in the purchase. The government has guaranteed a dividend of 7% on the shares and \$150,000 will be put aside by the Board of Finance every year as a guarantee fund for this purpose.

Taotai Chow Hsueh-hsi, late of Tientsin, has been appointed managing director of the company.

MINDANAO LUMBER TRADE

The report of Forester W. L. Hutcheson, of Zamboanga, covering the amount of lumber supplied the Philippine Railway Company for construction for the year ending June 30th, 1908, follows:

Zamboanga—1st group, 4,018.336 cu. ms.; 2nd group, 20,632 cu. ms.; 4th group, 4,885.773 cu. ms.; Total, 8,924.741 cu. ms.

Jolo—1st group, 213.532 cu. ms.;

Iligan—1st group, 116.704 cu. ms.

Cotabato—1st group, 2, 895.929 cu.

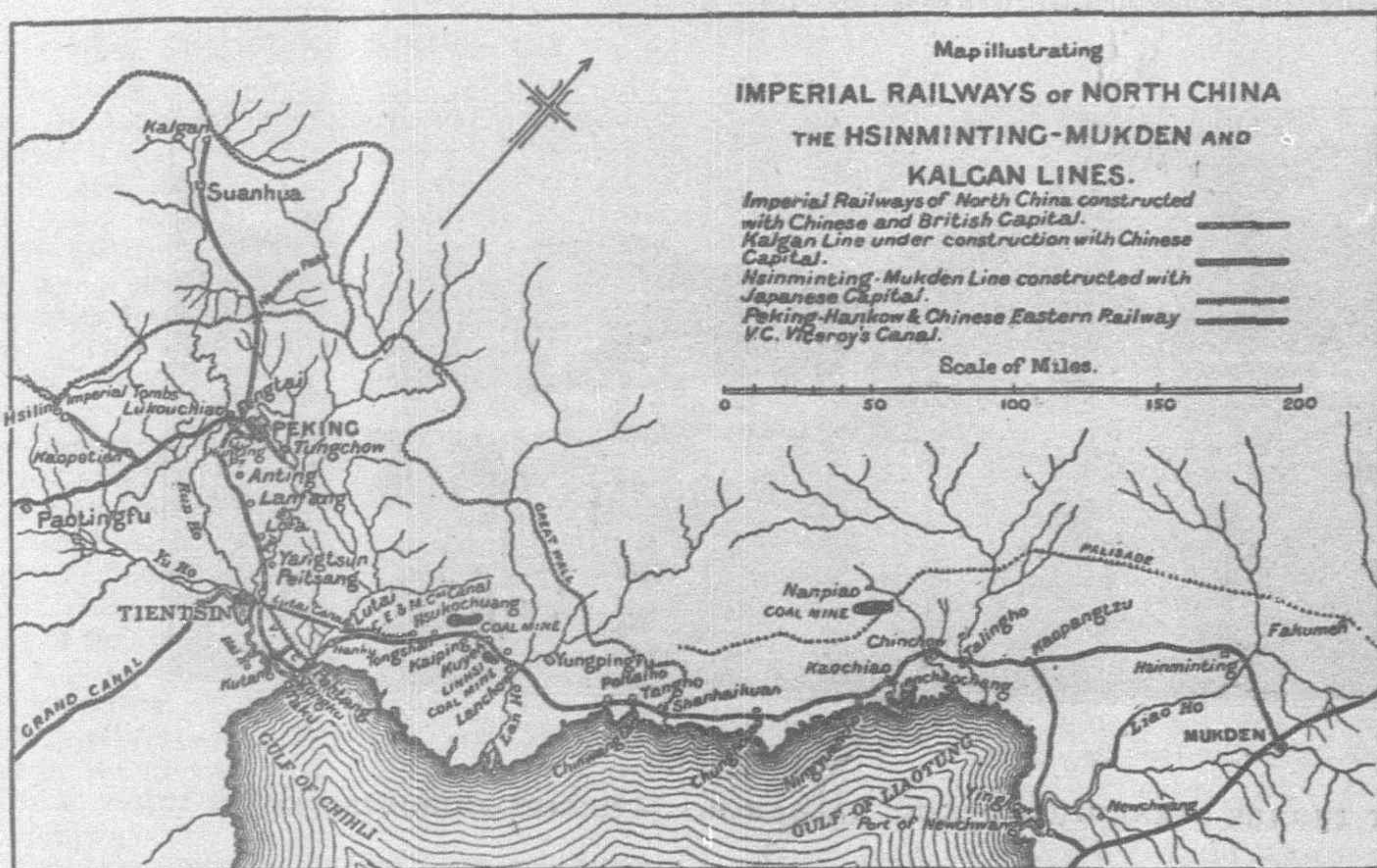
Total, 12,195.906 cu. ms. or 5,168,527 board feet.

THE PEKING-KALGAN RAILWAY

The completion of the Peking-Kalgan Railway which is now under construction will open up to development all the country North of Peking and provide transportation by the most direct route and at reasonable rates for freight that now must be carried by the expensive caravan routes. The line will be 130 miles in length and the entire supervision of the construction is under the direction of Director General, Mr. Jeme Tien Yow, the

As recently announced, the largest tunnel about 3,570 feet in length has been completed and the work on the other and lesser tunnels is progressing rapidly.

Some idea of the character of the country through which this road passes and its importance to the development of trade in North China may be gathered from the following excerpts from an article published in the *Shanghai Mercury* of recent date:



well-known Chinese engineer and graduate of Yale and whose capacity for the work is well demonstrated by the success attained in piercing the country at Nankau Pass where nearly 5,000 feet in all of tunneling will be necessary to connect the Northern and Southern sections of the road.

The section in which the tunnels are being constructed and where the capacity of the Director General to overcome natural obstacles is being demonstrated, includes 12 miles of the most difficult country, including the Pass referred to. The first section of the road between Fengtai, near Peking, and Nankau Pass, a distance of 33 miles, was completed and opened

"The building has been carried on by Chinese contractors who were working from the Southern as well as from the Northern end of the tunnel, in addition to which the work also was carried on through a shaft which was sunk several hundred feet from the highest point of the mountain pass, just where the inner section of the great Chinese Wall runs. (The Chinese name of the Wall is "Wan-Li-Chang-Cheng," which means "the 10,000 mile rampart.")

"This great wall, covering 1,400 miles in length, was built 221 B. C. as a defence against the Mongolian hordes. The wall attracts year by year thousands of visitors, who have rather a hard time to get there. However, in another

from where direct trains are found twice a day for Nankau Pass Station, which is the present southern terminus of the Kalgan Railway. At Nankau Pass donkeys or mules as well as mule-litters will be found. It needs about four hours climbing on the old pass route until the point can be reached where the inner section of the great wall exists. It is here on the highest point of the Pass where the large tunnel is pierced and from where another 60 miles of road lead down towards Kalgan where the outer section of the Great Wall is located.

"When this road is finished, it is expected that the bulk of merchandise, which since time immemorial has been carried over this Pass from China into Mongolia and Siberia, or vice versa, will be transported by rail. At present all the freight goes on camel backs, donkeys, mules, horses, carts, etc. It is a most interesting sight to pass the continuous upward and downward lines of animals loaded with merchandize and raw products, when one journeys and passes from Nankau Pass along this historic route.

"The main sections of the tunnel works are in charge and are supervised by Engineer Yen-Te-Ching, who was in the employ of the former American syndicate to build the Yue-Han Railway (viz., the Canton-Hankow Railway). He is a graduate of an American University.

"There is very little elevation from Fengtai to Nankau Pass. But after entering the Pass the elevation rises 1,800 feet in the short distance of 10½ miles. At the highest point the Railway crosses the Great Wall and here is the 3,570 feet long tunnel. In journeying along the narrow pass it can be seen that rails are now laid over high built embankments on the larger part of the whole road."

While the construction of this line still is in progress a further extension to open up Northern China is being proposed. According to recent advices from Peking, the Ministry of Posts and Communications favor the extension of this line to Kulun and President Chen Pi of the ministry advances the following argument in its favor:

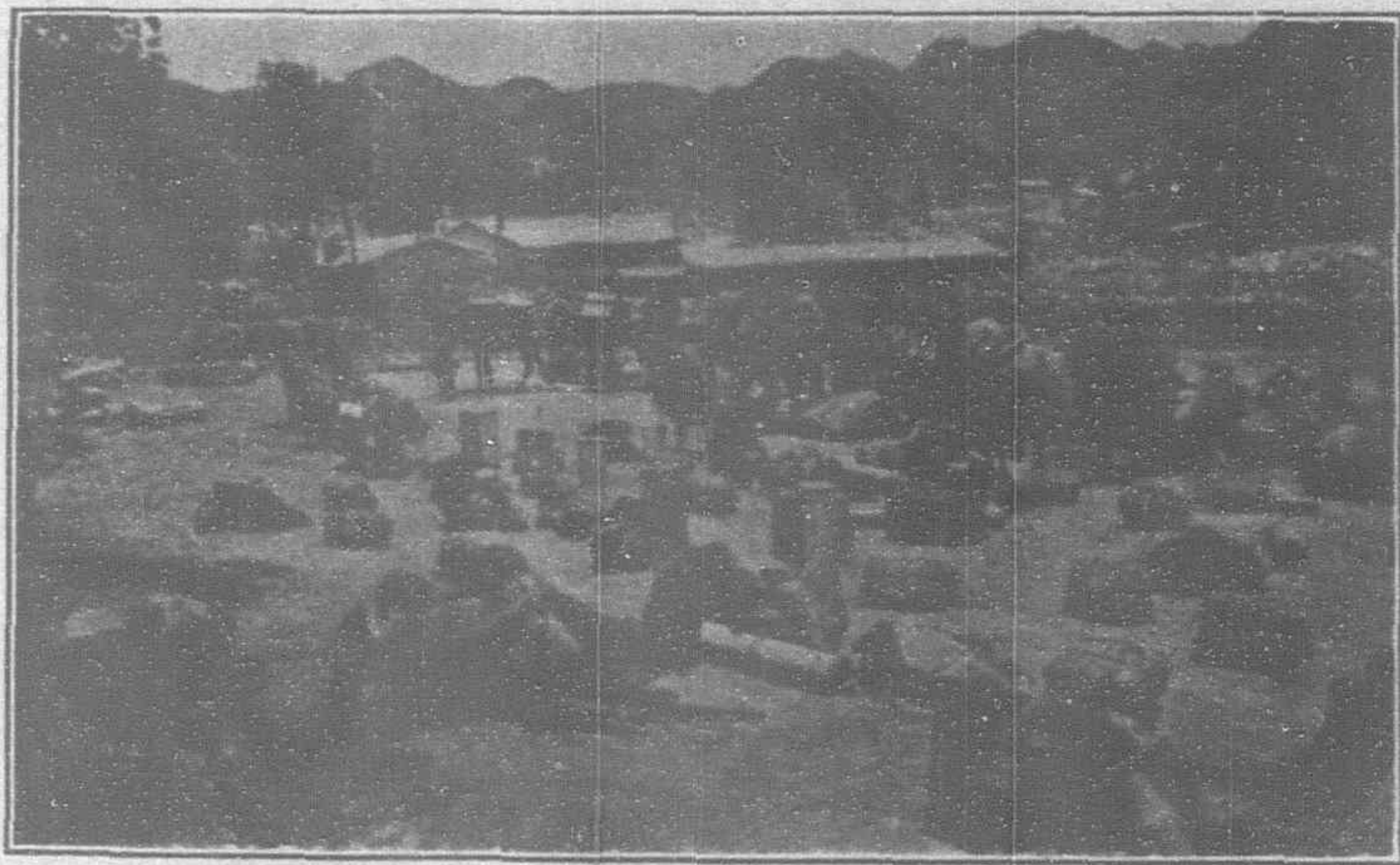
"(1) It will bring Mongolia into intellectual touch with the outside world.

"(2) It would facilitate communication between Peking and Mongolia.

"(3) It would have high strategic value.

"(4) It would give a great impetus to the development of Mongolian commerce.

"After considerable discussion it was decided that a settlement of the matter should be postponed pending an enquiry into ways and means of securing the funds, and the preparation



Squires, Bingham & Co., Manila Photographers.

NOONDAY REST OF CARAVAN UP NANKAU PASS, TRANSPORTING RAILWAY SUPPLIES



CAMEL CARAVAN ON NANKAU PASS—NOTE STONE RAILROAD BED AND WILLOWS PLANTED ALONG LINE

to traffic on September 30, 1906. This practically completed what might be called the South division of this line. In the meantime construction work has been in progress between the Pass by way of Suanhua and on the tunnels. It is expected that the entire line will be completed and open to traffic by December 31, 1909.

year, visitors will find an easy access to the wall by rail from Peking direct. At present the journey can be done from Peking taking a ricksha ride to the Hsi-Chi-Men, where there is the nearest station.

"In travelling from Tientsin, the Imperial Railway of North China leads to Fengtai,

of an estimate by Taotai Jeme Tien-yu on the subject of the probable cost."

In his recent work on *Railway Enterprise in China*, Mr. P. H. Kent, in referring to the Peking-Kalgan Railway, says:

"The effect of this line will be to open up the country to the north of Peking and greatly

to cheapen as well as to expedite the transit of goods from the interior to Tientsin. Kalgan is the junction of the great caravan routes from the west and from the north, by way of which the great bulk of wool and skins from Mongolia and the distant province of Kansuh, which form the more valuable portion of export cargo from Tientsin, finds its way to the foreign market.

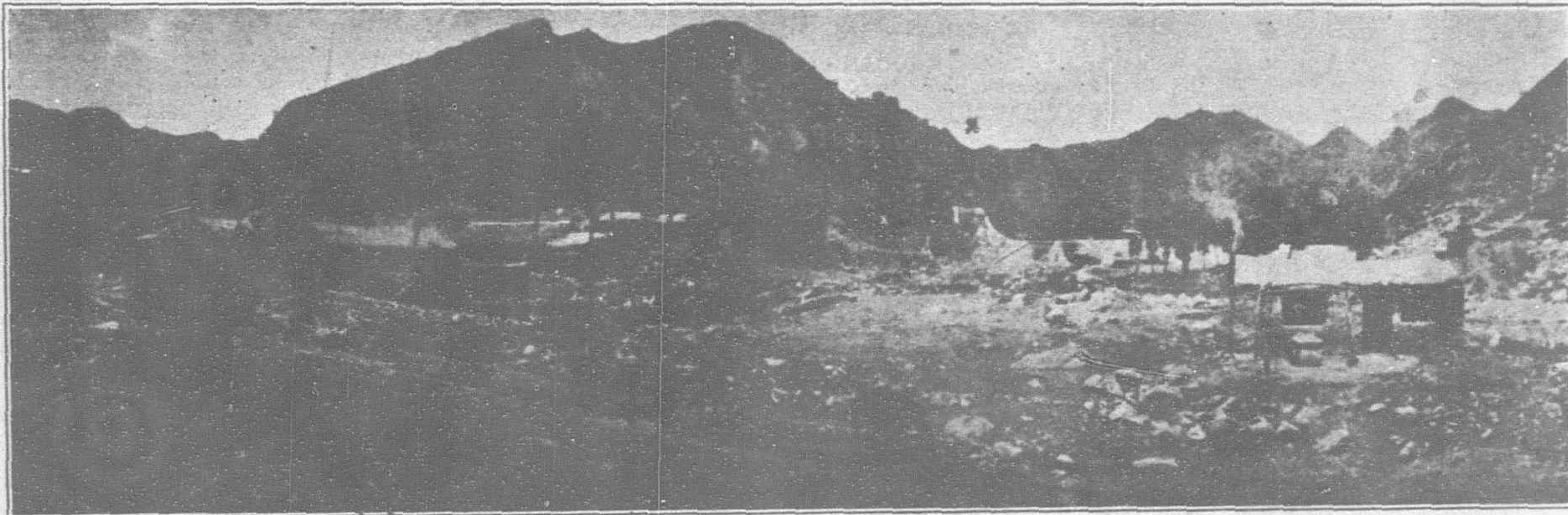
"As regards the question of the ultimate continuation of the Kalgan line across Mongolia, opinions seem to differ. Some years ago the Russians had a scheme for a branch from the Trans-Siberia Railway, by way of Urga and Kalgan to Peking. A flying survey was made at the time, and it was found that

*TAOTAI JEME TIEN-YOW, M. INST. C. E.

The Chief Engineer and Director of the Peking-Kalgan Railway received his foreign education in Yale University, the United States of America, where he graduated in 1878. He also studied in England where he matured his engineering profession, being elected a few years ago a member of the well-known Institute of Civil Engineers of London.

On his return from abroad, Mr. Jeme worked under the Imperial Railways of North China for a good many years, first as Assistant Engineer and later as Resident Engineer. In the latter capacity he had to travel to many places in North China, then untraversed by railroads, and, consequently, was able to acquire

Mr. Jeme, however, undertook the task. He doggedly and patiently worked on. It is true he had many difficulties to surmount, but by the autumn of last year, he had the satisfaction to report the completion of his line as far as Nankau, and the Great Wall will be reached by the end of this year, a remarkable achievement considering the tremendous natural obstacles to be overcome in the Pass. At the opening ceremony of the railway, Mr. Jeme received many congratulations for his ability and success. All the newspapers of North China, Chinese and foreign alike, eulogized his work and services. Nor does he not deserve the encomiums, for as pointed out by the press, when the history of railway



Squires, Bingham & Co., Manila Photographers.

HIGHEST POINT ON NANKAU PASS AT TUNNEL, OPENING ON PEKING-KALGAN R.R.—TUNNEL INDICATED BY X

virtually the only engineering difficulties would be experienced in the crossing of the Yablonoi Mountains, north of Urga. This scheme, however, has now, apparently, been abandoned. And it must be admitted that though such a line might, in certain circumstances, be politically justifiable, according to the point of view, and while its construction would be warmly welcomed by residents of the Far East, whom it would bring many days nearer home, it is difficult to see how it could be made to justify its existence as a purely commercial undertaking. At any rate it is one of those projects the realization of which will only come, after all, with the distant future."

In a review of railways in China, the *London and China Express* refers in a recent number to the Peking-Kalgan line and says:

"China, it is true, has been making the Peking-Kalgan line. We may perhaps here note incidentally that the prolongation of this line to Kiachta, and so to Irkutsk, would bring about a revolution in the possibilities of mail and passenger traffic between Europe and China. Roughly, the railway distance to Central Europe would be rather better than half the mileage of the sea route. Somewhere within the time of 10 to 13 days it would then be possible to traverse from North or South of China to almost any capital in Europe, proceeding via the Kalgan-Kiachta-Irkutsk line, and then over the Siberian Railway to Moscow, and thence connect with the other European lines. But to resume, China has obtained the funds for the Peking-Kalgan line from the surplus earnings of the Imperial Railways of North China, and the line has been constructed by men who have gained their knowledge of construction work on the same line. We believe we are quite correct in asserting that the trace for the line was run by the foreign engineers of the North China line, though they have had no part in the actual work."

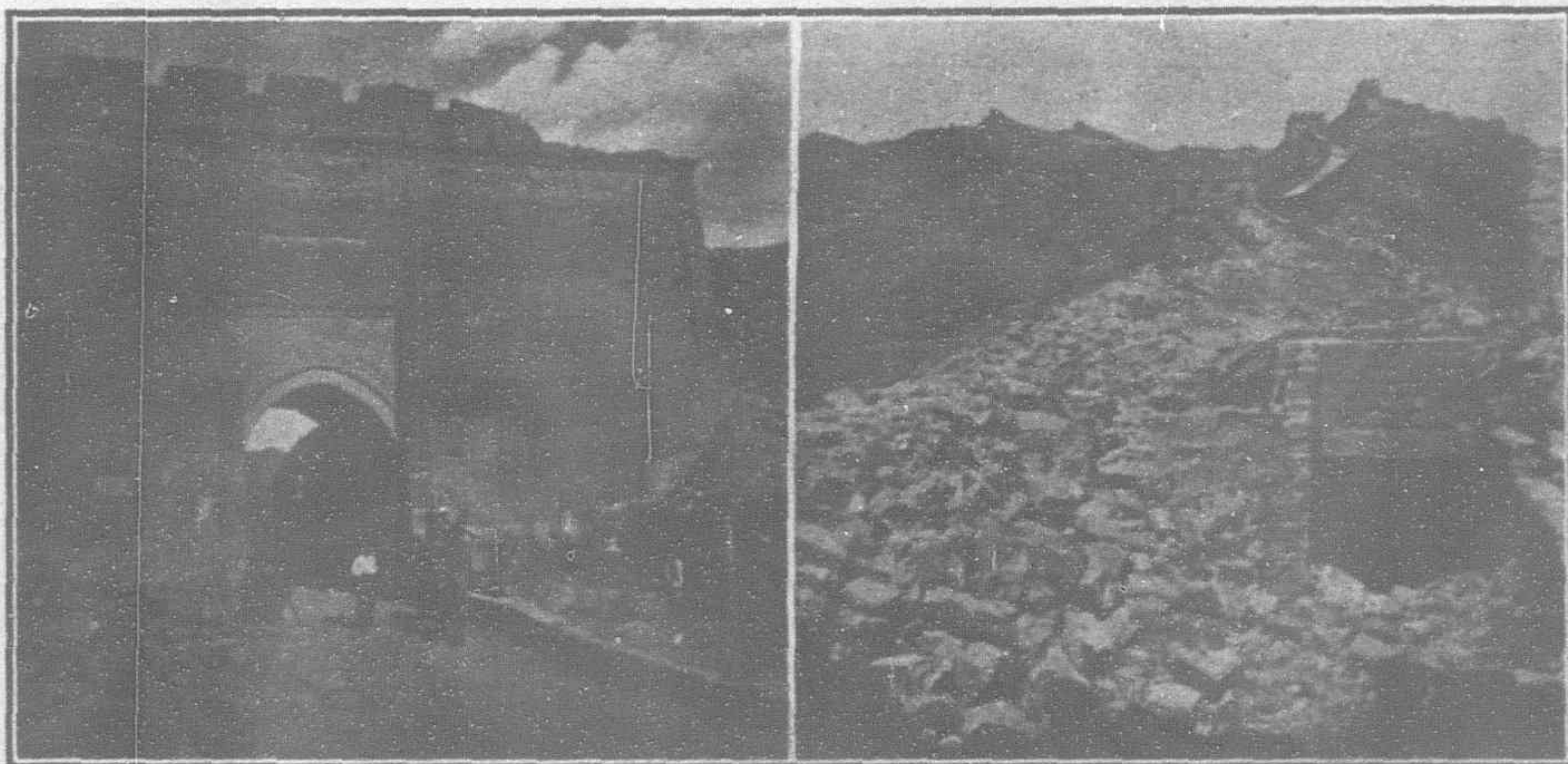
In a foot note Mr. Kent states that the estimated cost of the Peking-Kalgan line, including rolling stock, is 6,000,000 taels, or an average of £6,000 to £7,000 a mile.

The railway map accompanying this sketch is reproduced from one of Mr. Kent's illustrations.

much and varied experience in railway construction. At one time he was stationed in Tongshan, at another in Tongku, or in Yangts'un, or in Tientsin, but to whichever section he was put in charge he gave satisfaction to his chief, Mr. C. W. Kinder, C. M. G., M. Inst. C. E., the General Manager and Engineer-in-chief of the Northern Railways. He saw the completion of the Peking-Tientsin line, and the extensions to Shanhaikuan and Newchwang and other places. When the Chinese government decided a few years ago to construct a line between Peking and Kalgan, to which it was resolved no foreign interference was to be permitted, Mr. Jeme was selected for the

construction came to be written, Mr. Jeme Tien-yow will be remembered as the first Chinese engineer who had been able to build a railway and see to its completion without foreign assistance and supervision.

Naturally, when his reputation was established, railway syndicates tried to obtain his services. He was offered the post of Engineer-in-Chief of the Canton-Hankow Railway by the Viceroy of the Two Kuangs. But as most of our readers know, Viceroy Yuan Shih-k'ai could ill spare him from North China, and, instead, recommended another rising engineer, Mr. Kwong, for the post. Mr. Jeme became Assistant Director of the Railway,



Squires, Bingham & Co., Manila Photographers.

GATEWAY AND ROAD THROUGH GREAT WALL WHERE RAILWAY PASSES

VIEW OF GREAT WALL WHERE IT PASSES INTO MANCHURIA—PARTLY TORN DOWN

important post of Chief Engineer on the strong recommendation of H. E. Viceroy Yuan Shih-k'ai, who was then Director-General of the Railway Administration of North China. The practicability of this scheme was doubted in some quarters, especially among foreigners.

**World's Chinese Students' Journal.*

from which position he was promoted to the Chief Directorship when Director Chên Chao-ch'ang was transferred to Manchuria a couple of months ago. Mr. Jeme now, therefore, holds the chief position of chief engineer and chief director of the Peking-Kalgan Railway. Finally we are glad to hear that Viceroy Yuan Shih-k'ai has recommended the throne to confer the

degree of Chinshih on him. It will be remembered that when the Ministry of Education held an examination in Peking last year of those returned students who had studied in foreign countries, he assisted the examiners in going over the papers on engineering subjects. In Chinese officialdom an aspirant to an office must needs have a literary degree in order to entitle him to become a regular official. Although Mr. Jeme holds the rank of a Taotai or Intendant of a Circuit, he possesses no Chinese degree, and the Viceroy's effort to get him one is for the purpose of putting him on a footing with other regular Chinese officials and to signify a recognition by the Chinese government of the foreign education of China's son.

NEW PHILIPPINE MINING CO.

The success of mining ventures in the province of Benguet, and particularly Antamok district, is attracting the attention of the mining world, and the development of that region is practically assured. Capital, for years timid, is now assured and not a few mining companies are being promoted or projected to develop properties that promise good returns on investment. The latest prospectus received is that of the Headwaters Mining Co., Incorp., of Antamok, Benguet, with a capital of P600,000. The directors are well known businessmen, British and American, and professional men of the Philippine Islands who have been connected with successful mining enterprise in Benguet. They are F. Stuart Jones, of Messrs. Smith, Bell & Co., Thos. Colston Kinney, attorney and president of the Bua Mining Co., H. T. Fox, of Smith, Bell & Co., L. O. Hibberd, and N. Peterson. The secretary is F. J. Higham. The mine office is at Antamok, Benguet, and the Manila office at No. 16 Carenero.

The following is the announcement made by the company:

"The 'Headwaters' is the latest gold strike and the best prospect yet discovered in the Benguet Mining District. It comprises a group of twelve adjoining claims, or about 250 acres, and is situated at the source of the Antamok River about half a mile above the 'Bua,' 'Consolidated' and 'Camote' mines, all of which are in successful operation. The district, therefore, has been proved.

"Two well-defined ledges of free milling ore have been opened up on the property and traced by means of open-cuts and drifts for four thousand feet in length. The assays, taken at various places along the line of strike, average over P40.00 per ton; and the ledges run from 6 to 15 feet in width.

"Abundant pine timber and waterpower are to be found on the property; and a good wagon-road runs within a stone's throw of the western claims. Baguio, the Summer Capital of the Government of the Philippine Islands, is four miles distant from the mine. Skilled native labor for mining is obtainable at from P1.00 to P1.50 per day; and supplies of all kinds can be purchased at Baguio at reasonable prices.

"The Headwaters Mining Co. has been incorporated under the laws of the Philippine Islands for P600,000, all stock being fully paid up and non-assessable.

"The Directors of the Corporation are well-known business and mining men who have thoroughly investigated the proposition.

"For purposes of development P100,000 worth of this stock will be sold at 25% of its face value.

"This fund will be used solely for the further opening up of the mine and the blocking out of ore. When sufficient ore has been placed in sight to warrant it, the remainder of the Treasury stock will be sold at par for the purpose of erecting a 60 ton per day milling and cyanide plant.

"From this plant the probable results will be as follows:

Number of tons treated per year, 312 days, 60 tons per day, 18,720.	
Estimated Value of product per ton.	P20.00
Gross value of output.	P374,400
Cost of Production @ P6.00 per ton..	P112,320
Administration and Sundry Expenses.	40,000
Net profits for year	P222,080
or about 87% on the Capital Stock.	

"In making this calculation the value of the ore has been estimated at less than one half of the assay value and the cost of production has been increased P2.00 per ton over and above the actual cost as shown by other mines in operation in the same district.

"Subscriptions for the before mentioned shares should be made to the Secretary, No. 16 Carenero, Manila, P. I. Should the amount required be oversubscribed the shares will be issued pro rata."

	Oz. gold per ton	Value	Oz. silver per ton
Headwaters Ledge No. 1	1.00	20.67	6.48
Headwaters Ledge No. 2	1.82	27.29	1.06

N. B. These values are given in gold.

NEW PUBLICATIONS

Thirteenth Volume of Rosenstock's Directory, which contains a complete alphabetical list of business firms and foreign residents of the cities of Hongkong, Manila and Shanghai, has been received and a casual review of the volume gives the impression of continued application to the work of giving patrons the best possible service. That the publisher is endeavoring to give the residents and businessmen of Hongkong, Manila and Shanghai, a directory that will meet with their approbation, is indicated by the foreword of the latest revision. He says:

"The Directory is a necessity to modern commercial and social life. *No Publication Has More General or Extended Use.* It is referred to constantly by all classes of people at all seasons. It is used not only by residents of the city that it covers but by all strangers who come within its gates. The Directory is used by the travelling public arriving by the large mail steamers calling at Oriental ports every day, and by those who consult the Directory Libraries, which are maintained by directory publishers the world over—it being the custom of directory publishers to exchange publications, which are kept on file in each city for the benefit of the public.

"It is the earnest desire of the Publisher to improve and make each succeeding volume of greater value and utility to his patrons than its predecessor. The next issue will contain a directory of Hankow and Tientsin, and other additions will be made as time and conditions permit. No great enterprise was ever developed in a day; so it is with directory-making, but we assure our patrons that we will ever endeavor to do a little better to-morrow than we are able to report on our accomplishment of to-day. We want our patrons to co-operate with us by assisting our agents in their work of collecting data for the directory and thus help us make what is most to be desired, by patron as well as publisher, an accurate and up-to-date book of ready reference."

Classification is the publisher's offering to aid the businessman in adding to system, the economy in time and effort, and in this volume, his object seems to have been most satisfactorily attained.

The Journal of the Philippine Commission and the Inaugural Session of the Philippine Legislature has been received and covers the work of these two bodies from October 6th, 1907, to February 1st, 1908. The volume is bound in cloth and the Bureau of Printing from whose presses the journal was issued announces experiments in anti-vermin book varnish to protect the book from rodents and insects.

Typical Steel Railway Bridges is the title of a volume from the pen of W. Chase Thompson, M. Can. Soc. C. E., assistant engineer, Dominion Bridge Co., Limited, Montreal, Canada, and author of "Bridge and Structural Design," and issued from the presses of the Engineering News Publishing Co., New York. This volume is a sequel to "Bridge and Structural Design" and the author announces in his foreword that "The inclusion of the estimated weights of the structure is an important

feature of the book, as estimating forms a large part of the work of the designer. Where detail drawings are given, the estimates have been figured very closely and the relative weights of main material and of details are thus accurately obtained. In other cases, a percentage of the weight of the main material in trusses has been added to the details. The method of determining this percentage has been clearly demonstrated. The author trusts this book may be of service to those in actual practice, as well as to students and draftsmen who are less familiar with the methods used in designing offices."

"*Albany Grease*" and "*Albany Grease Cups*" is the title of a booklet of pleasing design received from Adam Cook's Sons, New York. Reference is made to the two lubricating lines of this firm and the advantages derived from their use. This Cup Leaflet is made available free of cost by addressing Messrs. Adam Cook's Sons, 313 West Street, New York City.

RUBBER EXHIBITION

The following circular was recently issued by Secretary H. C. E. Zacharias of the Planters' Association of Malaya:

"With further reference to the forthcoming International Rubber Exhibition in London, I beg to inform you that at a Meeting of the local Exhibition Committee it was resolved—in order to meet the wishes of what seems to be the majority of exhibitors—to rescind the local regulations previously decided upon and to substitute the following:

"1. Each exhibit will be shown under the name of the Estate whose produce it is;

"2. The quantity of Raw Rubber allowed to be shown by each property is limited to 28 lbs., but it is left to the Exhibitor to make up this total in as many different grades of rubber as he pleases;

"3. There will be no Selection Committee at all, and full discretion is left to the Exhibitor to show whatever seems good to him;

"4. Each Exhibitor will be charged \$10—this charge being in addition to any voluntary contributions which have already been invited from all Estates in the Peninsula;

"5. Each Exhibitor has to see that his case of exhibits reaches Messrs. Kennedy & Co., of Penang, not later than the 15th of July; and Messrs. Kennedy & Co., in conjunction with myself, will see that all exhibits are shipped on one Bill of Lading by Mail Steamer leaving Penang two days after that date.

"As you will see, the time at our disposal is very short, but my Committee trust that you will make special efforts to ensure on your part that the Malayan Section of the Exhibition does worthily illustrate the important industry that it is to represent.

HANGYANG IRON AND STEEL WORKS SECURES BIG CONTRACT

It has been practically decided by the directorate of the Canton-Kowloon Railway to place an order with the Hangyang Iron & Steel Works for the supply of all the steel rails, bridge steel and iron work necessary to the construction of this section of the road. This is the first occasion that so large an order has been placed in China for construction material by a railroad financed in part by foreign capital. According to the report of the managing director, Taotai Wei Hun, the purchase of steel and iron at the Hangyang works will mean a saving of many thousands of dollars. This saving is made on freight and greater expedition in delivery as well as in first cost.

The works have supplied the Peking-Hankow Railway with material in small quantities, but this is the largest order yet filed from any one section. The materials supplied for the Chinese companies in Liangkang as well as Szechuan and Lianghu have given satisfaction to the directorates and if this big order is delivered promptly and in good order, the future of the works is assured.

THE FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE

*By Paul C. Freer

The last meeting of the Philippine Islands Medical Association held in February of this year brought to the Islands eleven delegates from foreign countries, those represented being Ceylon, Hongkong, the Federated Malay States, Singapore, Siam, China and Japan, and it seemed to be the opinion of all of those present that the medical profession in the Far East

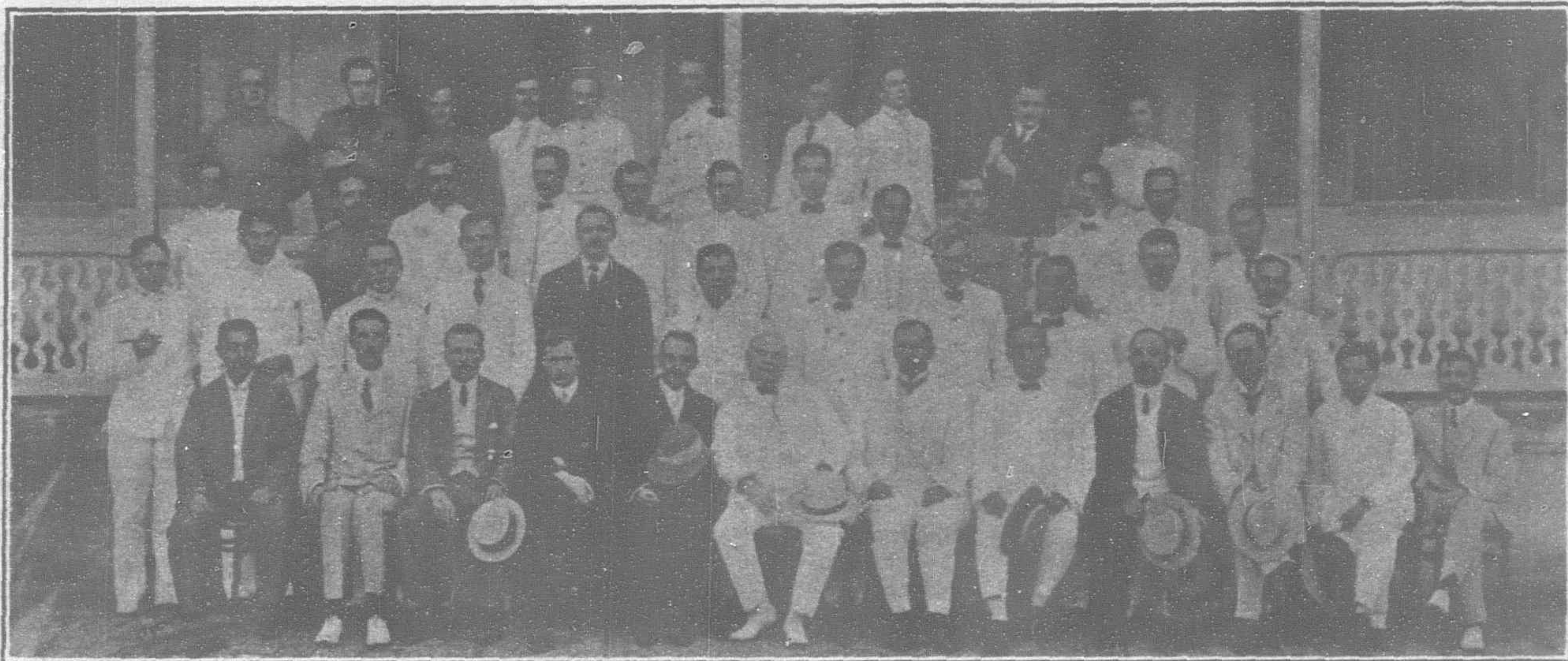
customs which it will be necessary to introduce in order to diminish the mortality and limit the spread of infectious diseases. While such an accomplishment may at present be but a remote possibility in India, it certainly is by no means hopeless in countries with a lesser population, and as the study of tropical diseases becomes more extended and a knowledge of

ization will be so great throughout the Orient that the present ominous meaning attached to the designation will be greatly modified.

BIDS OPENED

The following tenders for the construction of eight steel lorchas for the Quartermaster's Department, Division of the Philippines, were opened on July 15th:

The Shanghai Dock & Engineering Co. offered to build five 90-foot and three 126-foot lorchas for \$75,200, in all, the first four to



Group Photograph taken at Manila of the members of the Philippine Medical Association and the promoters of the Far Eastern Association of Medical Research with the foreign delegates present at the recent annual meeting.—Governor-General Smith and Commissioner Worcester, Secretary of the Interior, are seated near center of front row. The foreign delegates present were: Sir Allen Perry, P. M. O., Ceylon; Captain Ryley, Medical Corps, Royal Army, Hongkong; Dr. Clark, Director of Health, Hongkong; Dr. Fraser, Straits Settlements; Dr. Hayes, Surgeon General, Siamese Navy; Dr. Keith, Singapore; Major Vassal, French Army, Saigon; Dr. Cheng, Medical School, Imperial Army, China; Dr. Kitajima of Tokyo.

had advanced to a sufficient degree to warrant the formation of a new association which should promote the science and art of tropical medicine in the Orient.

The purpose of this association would be to endeavor to unite into one compact organization the medical profession of the Far East for the growth and diffusion of medical knowledge; to promote friendly international intercourse among physicians; to elevate the standard of medical education; to enlighten and direct public opinion in regard to the problems of hygiene; to form habits which may conduce to the prevention of disease among the native populations; and to present to the world the results of such scientific investigations.

The foreign delegates, as well as a number of representatives of the society in Manila, met on two days, after the sessions of the Philippine Islands Medical Association, and drew up a Constitution and By-Laws. It was decided that the membership of the Association should consist of the members of all duly constituted, regularly organized medical societies within the field of this organization, and all medical officials in the civil, military, naval, or other organized services of Governments within these territories. The Constitution and By-Laws were ratified by all of the gentlemen present, and the formation of the organization is now going on in the various countries which were represented.

It was decided to hold the next meeting in Manila, during the year 1910. The officers elected were Dr. Paul C. Freer, Director of the Bureau of Science and Dean of the Philippine Medical School, President, and Dr. Francis Clark, Medical Officer of Health, Hongkong, Secretary-Treasurer.

The formation of this association registers what is hoped to be a new era in reforming the hygienic conditions in the Orient. It may safely be stated that what are known as "tropical diseases" could with certainty be limited and, in many instances, even eradicated if the mass of Oriental peoples could be brought to a true appreciation of hygienic living and to an understanding of the changes in their

etiology and prophylaxis more exact, the means will be at hand effectually to improve the general mode of life and with it general health conditions. We are too prone at present to consider the tropical climate as the chief factor influencing the condition of the people, forgetting completely that this same tropical climate is a prolific breeding ground for all manner of pathogenic organisms. The discussions at the meeting of the Philippine Islands Medical Association made the fact patent that a very large percentage of people in the Philippines were more or less infected with animal parasites which, although not immediately fatal and perhaps not even visibly detrimental to health, nevertheless might produce a lassitude which might account to a large extent for the ease with which these people were attacked by other diseases and for the lack of energy which is noticeable among them.

A report of autopsies at the same meeting disclosed the serious nature and the high percentage of infections with tuberculosis in the Philippine Islands, and there is no doubt but that the same conditions exist in other Far Eastern countries.

A union of all the interests will therefore not only tend to increase the energy with which investigations will be carried on and hence lead to a more comprehensive knowledge of the so-called "tropical diseases," but it will also, by means of publications which will be read in all of the interested countries, stimulate activity in measures relating to hygiene. The Far Eastern Association of Tropical Medicine, therefore, apart from uniting the medical profession into a compact organization, has also a great missionary field, and, as the association spreads and acquires new members, and as its influence is felt in all parts of the region included in its membership, there doubtless will be accomplished results which will be of the highest importance to the communities at large and which will even effect, in a marked degree, the commercial prosperity of the countries interested. While it is not to be expected that the term "tropical diseases" will be eliminated because it will no longer refer to a specific class of infections, nevertheless, it is hoped that the influence of this organ-

be delivered in 22 weeks and the balance in 32 weeks and to be set up in Manila.

The Hongkong Whampoa Dock Co., Limited, offered to build each of the 90-foot lorchas for \$8,665 and each of the 126-foot steel lorchas for \$13,500.

Messrs. Warner, Barnes & Co. for each of the 90-foot lorchas, \$9,610.

El Varadero de Manila, \$12,000 for each of the 90-foot lorchas and \$16,000 for each of the 126 foot lorchas.

The Tanjong Pagar Dock Board, \$13,720 for 90-foot lorchas and \$63,616 for the three 126-foot lorchas to be delivered in Singapore.

Messrs. Wilson & Co., of Manila, \$9,900 for each of the 90-foot lorchas and \$14,600 for each of the 126-foot lorchas.

TAIKOO DOCKYARD & ENGINEERING COMPANY

The London & China Express announces the registration of The Taikoo Dockyard & Engineering Co. of Hongkong, in London, under date of May 23rd. According to the *Express*, the object of the company is to adopt an agreement with John Swire and Sons, and to carry on at Hong Kong the business of dock owners, mechanical and marine engineers. The signatories are:—Sir Edwin D. Lawrence, Bart., 13, Carlton House-terrace, S. W.; R. D. Holt, 1 India-buildings, Liverpool; C. C. Scott, Greenock; W. J. Thompson, 38 Mincing-lane, E. C.; John Swire, 8 Billiter-square, E. C.; G. Warren Swire, 8 Billiter-square, E. C.; J. H. Scott, 8 Billiter square, E. C. Each of whom takes one share. There is no initial public issue. Messrs. John Swire and Sons, of London, are general managers, and Butterfield and Swire are agents in Hong Kong. The registered office of the company is at 8 Billiter-square, E. C.

RIVAL FOR MACAO

A large company is being promoted with the approval of the viceroy for the purpose of converting the town of Wanchai into a port for the trade of Heungshan district to compete with the Portuguese port of Macao. This movement is the result of the dispute between the Portuguese colony and the Chinese over the boundary line.

* Director Bureau of Science, Philippine Islands.

THE GRAND EXPOSITION OF JAPAN

The year 1912 promises the greatest exposition of the world's products of the industries and the arts ever held in the Far East and, if the plans now under way are carried to a successful conclusion, the Grand Exposition at Tokyo will eclipse many of the modern expositions held in western countries in the last two decades. Japan has participated in almost every exposition held in other countries and from indications these former attentions and demonstrations of enterprise on behalf of the Nippon government will be reciprocated by all the powers.

Perhaps the most significant recognition that the Tokyo Exposition received to date was the appropriation of \$1,500,000 by the congress of America to be expended in making a comprehensive American exhibit. Germany, Mexico, Canada, New Zealand, Great Britain, France and other countries were prompt in expression of the spirit of co-operation and pledged themselves to participate liberally in the exposition.

The nucleus of the Exposition fund was projected by an appropriation of yen, 10,000,000 by the Imperial Japanese government and this amount has been greatly augmented already by appropriations from the different Imperial departments and provincial governments together with liberal contributions from commercial bodies and corporate and private enterprises.

The success attending the initial work of promoting the exposition is due to the activity and personal influence of the venerable Viscount Kentaro Kaneko, LL. D., His J. I. Majesty's Privy Councillor and Director-General of the Grand Exposition of Japan, supported by his capable working staff comprising Mr. Ushitaro Beppu, Director-General of Affairs, Grand Exposition; Mr. Yamawaki, Chief of Department of Exhibits; Mr. Okamoto, Chief Accountant; Mr. Sakai, Private Secretary to Viscount Kaneko and Mr. Yakochi, Chief of Construction.

In an address to the representatives of the press at the Peers' Club at Tokyo, Viscount Kaneko, in soliciting the co-operation of his guests, concluded his speech by a reference to the object of the exposition in the following characteristic words:

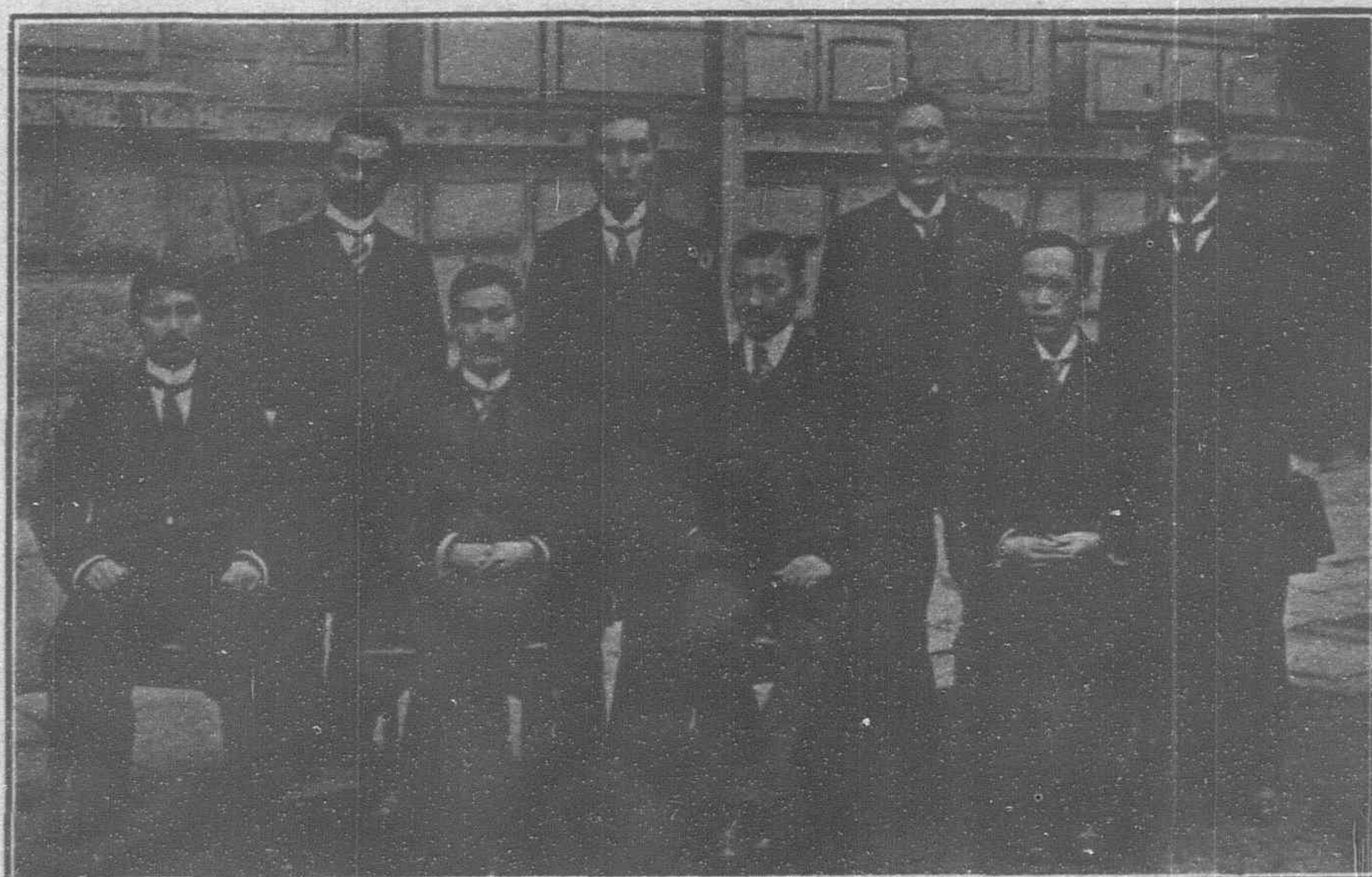
"We expect to make this exposition a national jubilee to show our gratitude towards Asia, Europe and America. During the last 1500 years, the Indian religion and Chinese philosophy have largely contributed to build up the intellectuality of the Japanese people and enabled us to grasp the new science brought by Europe and America fifty years ago. After we were admitted to reap the fruits of western civilization, nineteenth century science worked powerfully upon our mind, and made the modern Japan recognized by the whole world. Therefore on this occasion, we hope to show to our benefactors the results of adaptation and assimilation of the types of oriental and occidental civilization in intellectual works as well as in material pursuits.

"Whether we are fully prepared or not to assume the gigantic responsibility of holding such an exposition, and in inviting to it all the nations remains to be seen, but our earnest hope is to solicit all the nations to come together and assist us in this Grand Exposition of the arts of peace, and realize the debt, which one owes to the other, in the matter of promoting science and education, industry and commerce, of which the twentieth century is so justly and so proudly characteristic."

In an address delivered at a banquet to the foreign diplomatic representatives at Tokyo, in which a general invitation to participate was included, Viscount Kaneko said in part:

"In regard to the articles of exhibit, we have already sent out a circular, and all nations are invited to send their goods. These exhibits are specified under five categories—Education, Science, Machinery, Electricity and Manufactured Goods. Of course, any nation can erect a separate building at its own expense, where it may exhibit articles irrespective of

the five classes. As for the five classes mentioned, the Imperial Government expects to erect the buildings with space enough to take in all articles coming under the five heads; but as to the display of such exhibits as agricultural, mineral or fishery products, it is an earnest wish of the Imperial Government that the foreign Governments will erect the special buildings; and furthermore I should like to be



Working Staff Grand Exposition Tokyo 1912:—Ushitaro Beppu, Director General Affairs; M. Yamawaki, Chief of Exhibits; Mr. Okamoto, Chief Accountant; Mr. Sakai, Private Secretary to Viscount Kaneko the President; Mr. Yakochi, Chief of Construction.

permitted to emphasize that such buildings should be built entirely in the style so as to show their national characteristics. We want to have each building to show its own peculiar architectural art, so as to have the best models of European and American architectures on the Exhibition grounds. This will be an object-lesson for us, by which we might improve our so-called European buildings. With these objects and aims, we have sent a most cordial invitation to all nations, and the prompt replies are coming fast from different foreign Governments. Few days ago, it was reported in some foreign newspapers that the coming Exhibition of 1912 was to be postponed for five years. Allow me to make a correction. The Government has never contemplated such a change. We expect to carry out the preparation for our Exhibition in four years, and are ready to open it on the 1st day of April, 1912."

Viscount Kaneko later presented a comprehensive outline of the Grand Exposition at a dinner given the foreign consuls of Yokohama and Tokyo and officers of the Yokohama Board of Trade at the Imperial Hotel, in which he referred particularly to the relation of the exposition to foreign trade. His address follows:

"Gentlemen:—

"Allow me to avail myself of this opportunity given here this evening to explain the nature and extent of our Grand Exhibition of 1912. Outwardly and in name the exhibition would be domestic, but in materials we expect to make it an international one. Then you might ask me, why do we not call it an international exhibition? But when we look upon the present condition of Japan, the condition of the people, and the condition of transportation and social conveniences, we are not yet in a proper position to welcome foreign governments and peoples; therefore, we dare not ask them to come with a notion of participating in such an international exposition, as they are accustomed to in Europe and America, but we simply extend our most cordial invitation to assist us in our domestic exhibition.

"Limitations of Exhibits.—Neither do we dare ask foreign governments and people to send all their products, because the space at our disposal is not large enough to take them all. For this reason, the exhibits are limited under five heads—Education, Science, Machinery, Electricity and Manufactured goods. But here let me say a few words, if any foreign government or corporation would like to send the articles not included in the foregoing categories, such an exhibitor can build at his own expense a separate building, governmental

or private, where he can exhibit whatever products he likes; of course, the space allotted him will be free of charge, and we do not expect to collect a single penny in this connection.

"Plan of Exhibition.—The site of the exhibition grounds includes the former Parade Ground at Aoyama, belonging to the Army Department, which covers about 140,000 tsubo. This is not sufficient for our purpose, and we submitted a humble request to His Imperial Majesty the Emperor, who has granted us the use of his Imperial Estate of Yoyogi. This is nearly 160,000 tsubo, much larger than the Parade Ground. These two places will be connected by a wide avenue, extending somewhere over 700 ken in length. The site has been decided somewhat after the fashion of the Exhibition lately held at Milan, and also is similar to the site of the late Exhibition at Liege. These two grounds are connected by wide avenues, thus we might say that the Belgian and Italian exhibition gave us an example.

"Asiatic Products.—We have studied the coming exhibition with special points of view. First we expect to make it a genuine representative display of Asiatic products. As far as we know, no exhibition has ever been held taking in the whole of Asia for the special benefit of the peoples of the West. The gentleman on my left, the Chinese Consul-General, will, I am sure, assist us all in his power to make the exhibition meet our aim and bring a success in this respect.

"The next point, we expect to make the exhibition a special one in connection with the Western Colonies in the East. The gentlemen here present have lived in Japan many years, and have studied the trade in the Far East. As you all know that the Colonies of Europe and America in Asia are now coming rapidly to the front in international commerce. The products of these colonies are coming to Japan, some in the form of raw material, and other in a manufactured shape. This colonial trade of Japan is now held as an important factor of our future commerce in the Indian Archi-

pelago and Asiatic waters. Furthermore it extends beyond the equator to New Zealand, Australia and many other parts of the world. We expect to make Japan the centre of the colonial trade of western nations in the Far East.

"Machinery and Electricity.—In regard to machinery, electricity and manufactured goods, I appeal to your special consideration. You, gentlemen, have studied the growth of our commercial conditions. Japan has just entered the industrial comity; in other words, Japan is just transforming her former industries, as have been in Europe seventy or eighty years ago. Europe was once in the state of home industries, whose factories were found here and there by the roadside, or by little streams. Although Japan is now rapidly changing her industrial condition, we would ask you to bear in mind that we are yet in a very imperfect state. Therefore we ask the Western people, with their experience and scientific knowledge, to bring their new machines and new inventions, and show us how to change properly from home industry to the factory system, of which Europe and America are so proud to-day. So with regard to machinery, I hope you will influence your people at home to bring such machines, as will fit in the present condition of Japan. Supposing you bring a machine, which is so gigantic that we could not possibly utilize in this country at present, I fear that it might be shipped back after the exhibition. Therefore, I hope you will tell your home people just what dimensions, what horsepower, and what kinds of machines are needed for our use.

"Machines to be Bought.—Our Government desires every exhibitor from foreign countries to bring such machines as will find Japanese purchasers at the exhibition. We do not want foreign exhibitors to take back their machines home. We hope to have every one of them bought by our people, and the exhibitors return home with a prospect of future trade. That is the wish of our Imperial Government. Consequently we may possibly limit the horsepower of machinery by the regulation shortly to be issued, with a view simply to guide foreign exhibitors in the class of machines needed in Japan at present. In this connection, I might emphasize two kinds that are most needed now, particularly the hand machines and those having to do with electricity. As you know already, Japan is a mountainous country. From the coast to the base of the hills, the distance is so short that there are many rapids and water-falls, just as in Switzerland, or Sweden and Norway. Water-power is found everywhere, and we expect to utilize it by such machinery, as used in those countries. Therefore, if such machinery should be brought here, and its working be explained by foreign engineers, the Japanese will then understand its usefulness, and the machines will be sent for from the different parts of the country, where the pools, water-falls and rapids are abundant. Moreover the street cars, electric light and many electrical plants are still in the stage of infancy. In these lines, we need an assistance of foreign exhibitors. We cannot develop our foreign trade, or increase it without the assistance of western people. Therefore, we earnestly request your assistance to make this exhibition a success.

"Mutual Advantages.—With regard to manufactured goods, you are more or less directly or indirectly acquainted. As we have no large factories to supply even our own needs, so there is a very large margin to be filled up by the manufactured goods of Europe and America. Let your keen business men come to Japan and compare our articles with their own, they will no doubt find many things that might be supplied by their goods much cheaper than we make them here; because our industrial establishments are not up to the mark of the Western countries. Moreover they will find many articles made in Japan, which can be sent profitably home, for commercial purposes. Thus the coming exhibition could easily be made a reciprocal benefit and a mutual gain

as well as an interchange of ideas. I might enumerate many examples to corroborate what I have already said. The machine for cutting a timber has been introduced by our Government within the last year or two to be used in the Government forests. Formerly we used to cut our timber by hand-saw; but now we are using the machines imported from England. Such as dyeing substances from Germany, glass wares from Belgium, and engines and iron materials from the United States, and wines and artistic goods from France, are the important articles in our foreign trade, which has grown enormously within the last few years. If this exhibition is carried out in a proper way, it will prove a decided benefit both to Japan and foreign nations; therefore I do hope, gentlemen, to make this Grand Exhibition of 1912, not merely a temporary display of foreign products, but one of the lasting effect upon our international commerce. We expect to make this coming World's Fair a reciprocal and mutual benefit, by bringing foreign machines and goods, nearer and closer to the Japanese market. So closely interwoven should these commercial interests become, that no power on earth could disturb our cordial relations with foreign nations, which have been so happily maintained for a half century."

the members of The Philippine Assembly by C. E. Helvie who controls the sale of these machines for the Orient.

Using petroleum as fuel the expense of operation of this motor plow is only about half that of a steam engine, and if the present revenue tax on alcohol be removed by the government, the cost of fuel will be brought to a minimum as this commodity can be manufactured and placed on the market at so low a figure as to make the problem of fuel, which has been one of the most important factors of the past, a very minor consideration in the operation of traction, portable and stationary engines, as the formality of transporting a can of alcohol to the provinces is so simple as not to deserve serious consideration. Alcohol can be manufactured from almost every variety of vegetation found in the Islands and with the revenue tax removed from de-naturalized alcohol, the Hart-Parr traction, portable and stationary engines can be operated at about one quarter of the expense of steam engines.

In reference to the adaptability of the motor, Mr. Helvie says:

"Right here it may be well to say a few words regarding the time and fuel saved in the operation of this motor engine. There is no waiting to, 'Get up steam', it being possible to begin operation on one minute's notice;



HART-PARR 22 NOMINAL—40 BRAKE—HORSE POWER MOTOR PETROLEUM, ALCOHOL, OR GASOLINE—PLOWING AND HAULING ENGINE AT WORK

SOLVING AGRICULTURAL PROBLEM IN HORSELESS AREAS

The possibilities of development along agricultural lines in the Philippine Islands which are opened up by the introduction of the Hart-Parr 22 Nominal (40 brake) h. p. Motor Plowing Engine are so great as not to be at first comprehended. Probably the greatest hinderance to the cultivation of large tracts of land now unimproved is the lack of means whereby the necessary plowing may be done. In the past the great disadvantage in using traction engines for agricultural purposes has been the enormous cost of fuel as the expense of its transportation to the provinces must be added to its original cost. Setting aside the question of expense, however, the difficulties attendant upon the transporting of coal or wood in large quantities form an insurmountable barrier against the use of steam traction engines in many districts which otherwise might be brought under cultivation. The great need of the Philippine Islands is intelligent cultivation of the soil and anything that tends to solve the present perplexing problems facing the agriculturist will prove a veritable boon.

The Hart-Parr Motor traction engine is built to consume gasoline, alcohol or petroleum as fuel, the latter having been used in the successful test recently given for the benefit of

as soon as the engine stops the consumption of fuel also stops; the difficulties and expense of hauling fuel and water to the engine are eliminated; there is no drawing of fires; no boiler to require expensive repairs; no pumps or injectors to get out of order, and the simplicity of operation makes the services of an experienced engineer unnecessary, as a few days' instruction will be sufficient for the owner to acquire the knowledge essential for the successful operation of his engine.

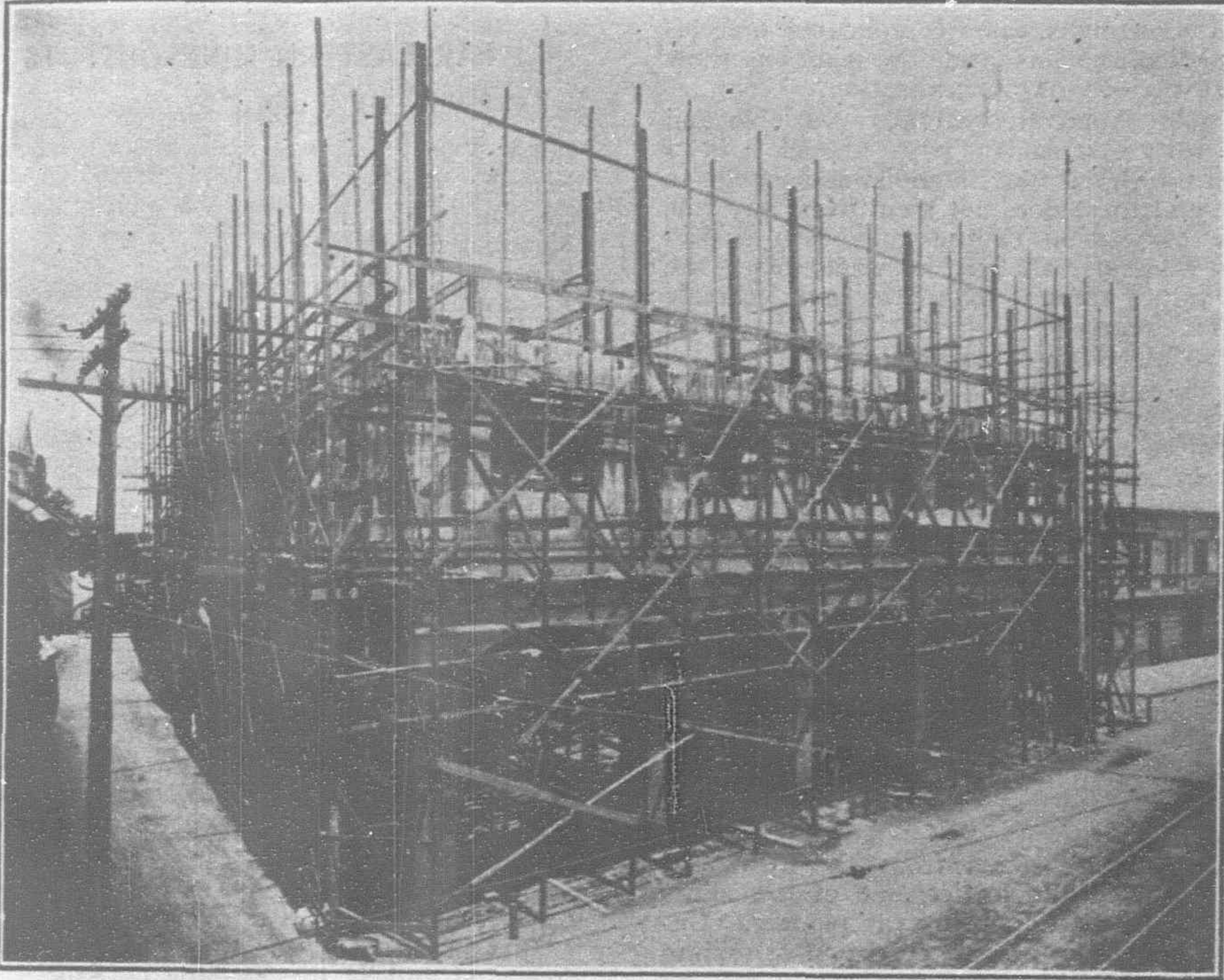
"The Hart-Parr traction engine is built on simple lines and for the generation of the greatest amount of power with the least possible mechanical complexity. One of these engines has been used to haul a large steam traction engine out of the mud where it had mired down and been allowed to remain for several weeks being unable to move itself.

"The Hart-Parr engine, when attached to it, not only moved itself, but readily and without the least difficulty, pulled the steam engine out of the mire without the necessity of using jacks or other appliances.

"The success of this engine in working in soft or sandy soil is partly due to the construction of the wheels which are especially designed for the purpose and make it possible for the Hart-Parr plowing engines to work successfully in soil where another engine would bury itself."

AMERICAN HARDWARE COMPANY'S NEW BUILDING

When the American Hardware Company of Manila occupies its new home on Calle Echague, it will have the distinction of being in possession of the largest building built of structural steel and reinforced concrete in the Philippine Islands devoted to trade. The building is 95 ft. x 100 ft., its front part being three storeys, and the rear four storeys, and completed will cost ₱125,000.



THE AMERICAN HARDWARE CO.'S NEW FOUR STOREY STRUCTURAL STEEL AND REINFORCED CONCRETE BLOCK IN MANILA

The construction is of structural steel girders and reinforced concrete. Either of the two elements used in this work is sufficiently stable to carry the entire loading so that it might be said that the construction is capable of carrying a double loading. The additional loading capacity will, however, be appreciated in view of the dead load which will be carried in the building from the heavy hardware stocks necessary to the extensive operations of the company.

The foundation is made of substantial piling and one feature of the construction is the provision made for protection against earthquakes. In this respect the specifications were patterned after the latest in the construction of buildings in San Francisco where a special study of the subject has been made by architects since the great upheaval there.

The entire building will be occupied by the company. The second and upper storeys will be used as godowns and display rooms while the first storey will be utilized as a salesroom. The building will be equipped with an electric freight elevator. The entire interior finish is of the finest Philippine hardwood and a plate glass front extending the length of the building 16 feet high will add to its exterior beauty and give an abundance of light to all parts of the interior.

Mr. Robert M. Loper is the contractor. The construction began January 15th, the roof finished July 12th and the company expect to occupy it August 15th.

Green Island Cement was used throughout in the concrete construction.

PERSONAL

M. T. Liong, formerly customs taotai at Shanghai, has been appointed superintendent-in-chief of the Railways of China and given a place as vice-president on the board of posts and communications.

Dr. Robert Koch, the famous German bacteriologist, recently arrived in Tokyo and proposes visiting different points in China, India, Java and to call at Cairo on his way to Europe. He was given a very warm reception by the members of the medical profession in Japan and arrangements are being made to receive the distinguished scientist at the different ports.

Mr. Donald McColl, the new traffic manager of the Shanghai Tramways, arrived in that city June 6th to take charge. Mr. McColl

was formerly chief bookkeeper of the Glasgow Corporation tramways and has seen service in Lisbon as accountant and traffic superintendent of the electric tramways there. He was later appointed general and traffic assistant of the Metropolitan District Railway which was then about to be electrified. Mr. McColl is the author of "Tramway Bookkeeping and Accounts".

M. Korostovetz has been appointed Russian minister to Peking. This diplomat served as secretary to the Portsmouth Peace Conference and has an excellent knowledge of English. He is also thoroughly equipped for the duties of minister as a result of his wide experience in far eastern countries.

Edward Gordon Lowder Esq., a commissioner in the Chinese Imperial Customs' Service, has received His Britannic Majesty's license and authority to wear the insignia of the First Class, Third Division, of the Imperial Chinese Order of the Double Dragon, conferred by the Emperor of China for valuable services.

Mr. Dortmuller of the Kia-chow-Tsinan Railway has been appointed chief engineer of the German or Northern Section of the Tientsin-Pukow Railway.

Mr. C. Johnson, formerly traffic manager of the Canton-Hankow Railway, has been engaged as chief engineer of the Hunan section.

Mr. Carl Mathiesson of Tientsin has been appointed secretary to the managing director of the Tientsin-Pukow Railway.

Mr. A. H. Bottenheim, general manager of the Vacuum Oil Co., is making a tour of Man-

churia, Mongolia and Siberia with a view to establishing new agencies of this company. He will proceed down the Amur to Vladivostok, says the *Peking & Tientsin Times*.

Mr. Charles Bradbury, formerly superintendent of telegraphs, British North Borneo, has been selected by the Canadian Government to take charge of its wireless telegraph station at Cape Lazo, Vancouver Island.

The *China Critic* announces the arrival at Tientsin of Mr. H. N. Fulton of the firm of Messrs. Howarth, Erskine, Limited, of Singapore.

Mr. J. Yamamoto, director of Mitsui & Co., has been making a tour of inspection of the different branches and agencies of the company in China.

Mr. C. H. Allin, director of Posts and Telegraphs of the F.M.S., is on a trip to Australia.

Mr. F. S. A. Bourne, acting judge of H. B. M. Supreme Court at Shanghai, sailed for Seoul, Korea, last month.

Sir Walter Caine Hillier, K. C. M. G., C. B., professor of Chinese at King's College, London, has been appointed Adviser to the Chinese Government. Sir Walter joined the British consular service in China as interpreter student in 1867 and served until 1904 when he was serving as consul-general to Korea, resigning to take the Chinese chair in King's College.

Mr. F. E. Cloud, American vice-consul-general at Shanghai, has been promoted to the rank of consul and assigned to Antung.

Mr. T. C. Swaby has accepted the position of general business manager of the *Siam Observer*.

Mr. Robert William Mansfield, C. M. G., who has been 38 years in H. B. M. consular service in China and who has until recently been consul general at Canton, retired recently on pension. Mr. Mansfield has a wide acquaintance in China and has enjoyed the confidence and regard of all foreigners in South China without regard to nationality and will carry the best wishes of all with him in his retirement.

Manager M. E. Legros, manager of the French Mining Co., Kampar, is on leave in France.

Mr. A. R. Vincent, formerly judge of H. B. M. Supreme Court for Siam, has been appointed assistant Judge of H. B. M. Supreme Court at Shanghai *vice* Mr. F. S. A. Bourne.

Mr. H. K. Chambers, civil engineer of the works department, Naval Yard, Hongkong, leaves for England on a vacation.

Mr. S. Silverstone, manager for Hongkong of the Pacific Mail Steamship Co., Occidental & Oriental S. S. Co., the Toyo Kisen Kaisha and the Portland Steamship Co., sailed for the homeland on the Korea last month for an extended vacation.

The Emperor of Japan has conferred the fifth class of the Imperial Order of the Rising Sun upon Mr. Walter J. Ballard, the well-known writer and accurate compiler of trade statistics.

Mr. Levien, commercial agent for the New South Wales government, has been visiting the principal ports of the East with a view to extending the trade of the Commonwealth and expects to make his headquarters permanently at Shanghai as soon as his arrangements are complete. He is now interested in promoting a refrigerating line of steamers that will include Tientsin, Newchwang, Dalny, Chemulpo and Japanese ports as well as Shanghai.

THE AROROI MINING DISTRICT, MASBATE

*H. G. FERGUSON

The Aroroy mining district is situated in the northwestern part of the island of Masbate, Philippine Islands, near the junction of the two prongs which form the island, and on the eastern side of Port Barrera, a deep bay which cuts far into the northern coast. The principal mines and prospects lie within a district 12 km. from north to south and 6 km. east to west, bounded on the north by Ticao Strait, on the east by Mt. Vil-lon, on the south by the Lanang river and on the west by Port Barrera.

Three permanent streams drain the area, the Buyuaen flowing northerly into Ticao Strait, and the Guinobatan and Lanang rivers flowing northwesterly into Port Barrera.

Near the bay are a great number of small hills and ridges generally trending in a northeasterly direction. Three large hills occupy the central portion of the area. The northern of these, Mt. Aroroy (or Kanataouataouan), has an elevation of 250 meters and is separated from its southern neighbor, Mt. Bagadilla, by Bangon creek, a tributary of the Guinobatan. Mt. Bagadilla has an elevation of about 340 meters and is separated from Mt. Kalakbao (elevation 202 m.) by the deep canyon of the Guinobatan River. These three hills all trend to the northwest and owe their height to the greater resistance offered to erosion by the numerous quartz veins which outcrop here. Nearly all the mines of the district are located on these hills.

Southeast of Mt. Bagadilla is the highest mountain in the district, Mt. Vil-lon, or Liberty Cap, as it is called by the American miners, which reaches an elevation of about 400 meters. This mountain, as far as known, contains no veins and has its long axis in a northeasterly direction, at right angles to the general trend of the topography. Other prominent hills are Mt. Cogran, a ridge running northwesterly in the southern part of the district, along which the vein formerly worked by the Mt. Cogran Co. outcrops. There is also a range of hills cut by the Lanang river in the southern part of the area, between two hundred and two hundred and fifty meters in height.

Near the coast the country is covered with cogon, but a few kilometers inland there is thick forest containing much valuable timber. At the mouths of the Guinobatan and Lanang Rivers are vast mangrove swamps which will furnish an immense supply of excellent firewood.

Geology.—In the north of the district there outcrops a coarse-grained rock locally known as "granite" but in reality a syenite. Further south on Aroroy and Bagadilla mountains is a complex series of altered sedimentary and fine-grained basic igneous rocks. At the Gold Bug open cut there is an exposure of coarse conglomerate and carbonaceous slates. Near Mt. Vil-lon there are exposures of red slate with lenses of psilomelane. South of this sedimentary series are andesites and andesite breccias, dipping to the southwest at small angles. At the southern edge of the district basalt comes in. Mt. Vil-lon is composed of a rather coarse-grained andesitic rock, which may be intrusive. Concerning the relative ages of these rocks the only point that is clear is that the andesitic series is younger than the rocks of the northern part of the district.

After the andesite came the period of vein formation. The veins, while they cut all the formations including the andesite, are for the most part confined to the northern part of the district where the older rocks outcrop. They are in general closely parallel, the strike being northwest, and stand practically vertical, though with a slight tendency to dip to the northeast in the northern veins and southwest in the southern. A second vein series of less importance runs nearly east and west crossing the main series. As a general rule the gangue is quartz with oxides of manganese and iron, carrying free gold at the surface and grading

into sulphides at depth. However, the veins exhibit great mineralogical variety, especially in the proportion of iron and manganese present. Calcite often occurs as the principal gangue mineral and sometimes both quartz and calcite are present. In a few veins sulphides of copper are prominent and in rare cases galena and sphalerite occur. The veins as a rule show evidences of faulting along their walls, and in many cases complicated brecciation and smaller veins inside the main one show different periods of mineralization.

The gold values are extremely variable and follow rather irregular pay streaks. As a rule the workable ore is indistinguishable to the eye and there does not seem to be any rule for the association of the gold with special gangue minerals, though in some cases the higher values seem to follow the more coarsely crystalline quartz.

In two places there occur small outcrops of a dark limestone capping the veins, and hence younger. On the west side of Port Barrera are terraces of white coral limestone of comparatively recent date. Evidently the country to the west of the bay is a more recent uplift while the Aroroy region has remained stationary.

Mining.—Lode mining was carried on to a very considerable extent in prehistoric times by means of deep narrow open cuts which seem to have followed small rich pay streaks. In Spanish times there seems to have been a certain amount of prospecting done, as is shown by various squared shafts; and the ruins of an arrastra, worked about a hundred years ago by a Spaniard and an Englishman, are still to be seen.

Modern mining dates from the American occupation, Mr. Edelmaier, one of the mine-owners of the district, being the pioneer. Unfortunately for the present condition of mining in the district the work was conducted by men without training or ability, expensive machinery was imported before proper development work had been carried out, sampling was largely neglected, and little attempt was made to block out ore reserves. The result has been a succession of failures which have given the district a bad name. In a district like Aroroy there is especial need for extremely careful work, as the ore, while plentiful, is of a low grade and the difference of a peso a ton in the cost of mining might easily determine the fate of a mine.

Natural conditions are extremely favorable for cheap mining. The mines are only a few kilometers from a perfect harbor, and a road is now being built from the village of Aroroy to the mines. There is an abundance of excellent mine timbers at hand as well as excellent firewood. The Guinobatan river, flowing through the center of the mining district, gives good mill-sites and should be a future source of water-power. The veins are vertical and outcrop on fairly steep hillsides which will make mining very easy. The ground is firm and requires but little timbering. The two difficulties which the miners have to contend with are labor and the variations in the value of the ore. The first will solve itself, when concerns with sufficient capital come into the field, by the importing of more efficient laborers from other islands, and by the development of the contract system of payment.

In default of any means of grading ore by eye, it will be necessary for each company intending to do serious mining in the district to be provided with its own assay plant and a competent assayer. Frequent assays must be made from all the working faces, otherwise much worthless material will be mined as ore.

Insufficient capital, inexperience, gross mismanagement, and petty quarrels among the American miners, have been responsible for the present stagnation of the industry in this district. It is to be hoped that a new era will soon dawn and that companies will be organized with sufficient capital to employ proper mining methods and will be willing to wait

for their returns until proper development work has been done. Unless mining here is treated as an investment and not as a gamble there will be no future for the district.

There is at present available at the Bureau of Science a limited number of topographical maps of the Aroroy Mining District, covering an area of approximately 40 square miles and showing the principal mineral veins. The maps are drawn to a scale of 1/20,000 (about 3 inches to 1 mile) and are printed on photographic paper with dark lines on a light background. You are advised that while the supply lasts these maps will be sold at the price of P1.00 each. Request for same should be forwarded to the Chief Clerk, Bureau of Science, Manila, P. I.

FAR EASTERN MINE OUTPUTS

Tin Mine Returns, for May.

	Piculs.
Belat.....	405
Bruseh.....	401
Gopeng.....	687
Kanaboi.....	225
Kinta.....	415
Kledang.....	352
Kuantan.....	258
Lahat.....	325
New Gopeng.....	270
Pusing Lama.....	501
Rambutan.....	290
Redhills.....	150
Royal Johore.....	160
Sempam.....	100
Serendah.....	419
Sipiau.....	133
Tekka.....	250
Tronoh.....	1501

GOLD OUTPUTS

Raub Australian Gold Mining Co., June Output, 995 oz.

Oriental Consolidated Mining Co., April Output in value, \$105,554 in gold.

Benguet Consolidated, Output for June, 109 oz. free gold and 70 lbs. cyanide @ \$30.

Bua Mining Co., Output for June, 133 oz. free gold and 25 lbs. cyanide @ \$30.

Paracale Dredging Co., Output for June, 463 oz. free gold.

BATAN COAL MINES

Captain Hubert L. Wigmore, U. S. Engineers, has submitted his report on the progress made in the development of the coal deposits on Batan Island, Philippine archipelago, to the Chief Quartermaster, Philippines Division, and it is not improbable that the necessary coal for the division may be made available within the year. In his report, Captain Wigmore states that by the end of September, the government coal mine will have an output of at least 2,500 tons a month. The tests made of this coal pronounce it a fair steaming coal, and while the results obtained are not so satisfactory as from Japanese or Australian coal, it can be produced much more cheaply and with the saving in transportation, its use in the division will prove much more economical.

The captain recommends the exploitation of the timber on the island by the government and that the receipts from this source be utilized in the development of the coal deposits.

The harbor at Linguan is reported to be an excellent site for a coaling station and there is little doubt but that the recommendations made in its favor will be favorably considered.

INSULAR COAL COMPANY'S RAILWAY

The acceptance by the Insular Coal Co. of the franchise authorized by the Philippine government for the construction of a railway connecting the coalfields of Camansi, Cebu and the port of Danao in the same province last month, inaugurates the first railway of its kind, designed to develop the coal mining industry, in the Philippine Islands. This line now under construction is about twelve kilometers in length. It will tap the Camansi and Compostela coal districts now controlled by the Insular Coal Co. The line will also connect with the Philippine Railway Co.'s line in Cebu.

*Geologist, Division of Mines, Manila, P. I.

FAR EASTERN COMPANY REPORTS

YOKOHAMA FIRE INSURANCE Co.—At the semi-annual meeting held June 22nd, this company declared a dividend at the rate of 10% per annum.

JAPANESE SUGAR COMPANIES.—The sugar companies of Japan now operating as a trust declared a dividend of 15% per annum at the general meeting held in Tokyo recently. This dividend was paid after providing for yen 300,000 to cover the yearly payment in redemption of the seven million yen loan.

TINAN SUGAR MANUFACTURING Co.—This Formosan company has concluded a most successful half-year and the announcement is made that a dividend of 20% was announced for the term at the recent meeting.

DORAT PETROLEUM INDUSTRY Co.—This leading oil company of Java distributed a dividend of 12% for the year 1907 against 9% for the previous term.

JAPAN-CHINA STEAMSHIP Co.—At the half-yearly meeting of this company at Tokyo last month the directors' report showed a net profit for the term of yen 1232 and no dividend was authorized. Excessive competition was the explanation given of the lack of success of the enterprise during the period and the directors added that the freight carried by the company was less than one-third the amount carried the previous year.

SHANGHAI MERCURY, LIMITED.—The directors of this company recommended the payment of a final dividend of 6% making 10% in all for the year.

RUSO-JAPANESE BANK.—Advices from Berlin state that the report of the directors of this institution for the year 1907 showed a loss of roubles 4,216,630, the amount being covered by the bank's reserve.

CICELY RUBBER ESTATES Co., LIMITED.—The directors of this prosperous company recently recommended the payment of a final dividend of 27.5% making a total of 47.5% on preference shares and a final of 22.5% making a total of 37.5% on ordinary shares for the year.

EAST ASIATIC Co.—This company declared a dividend of 8% for the year 1907 against 11% for 1906. The reserve account amounts to 3,600,000 kroner and a balance of 418,865 was carried forward.

CHINA MUTUAL LIFE INSURANCE Co.—A most encouraging report was submitted by the directors at the annual meeting held in Shanghai May 28th, and a dividend of tael one a share payable half yearly on the first days of July and January, respectively was authorized.

JAPAN PAINT Co.—A dividend at the rate of 12% per annum was declared at the half yearly meeting of this company held last month.

HOTEL DES COLONIES Co., LIMITED.—This company paid a dividend of 6% for the year 1907 and the directors' report indicated larger profits for the next term.

VOELKEL & SCHROEDER, LIMITED.—At the annual meeting of the shareholders of this company a dividend of 10% was declared for the year 1907.

LANE, CRAWFORD & Co., LIMITED.—At the twelfth ordinary meeting of this company held in Shanghai a final dividend of 7% making 12% in all for the year was directed paid.

WEEKS & Co., LIMITED.—For the year ended February 29th, 1908, a final dividend of 6% making 10% for the term was authorized.

TOBU RAILWAY Co.—This company has declared a dividend of 6% per annum for the first half-year.

MOJI FIRE INSURANCE Co.—For the first half of 1908 a dividend of 20% per annum was paid by this company.

THE SHINAGAWA WHITE BRICK MANUFACTURING Co.—At the general meeting of this company a dividend of 12% was declared for the term.

REUTER TELEGRAM Co.—A final dividend of 2.5%, making 5% for the year, was declared at the annual meeting of this company.

WATKINS, LIMITED.—According to the directors' report for the year the entire mortgage account of the company has been wiped out and the title to the Watkins' building is clear. The prospect for a dividend next year is brighter.

PENINSULAR & ORIENTAL STEAM NAVIGATION Co.—The report for the half-year ended March 31st showed a general falling off in business compared with the corresponding term last year. The usual interim dividend of 5% per annum on preferred stock and 7% per annum on the deferred stock was authorized.

INDO-CHINA STEAM NAVIGATION Co., LIMITED.—At the annual meeting of this company in London June 26th a dividend of 6% on preferred shares for the year 1907 was declared and no dividend on the deferred shares. The underwriting account, according to the directors' report, has a credit balance of £240,000; the general reserve, £10,000, and £13,750 carried forward.

LINGGI PLANTATIONS, LIMITED.—The directors have recommended the payment of a final dividend of 10% for the year ending December 31st, 1907, making in all 20% for the year and to carry forward the sum of £4,000.

WEI-HAI-WEI LAND & BUILDING Co.—An extraordinary meeting of the shareholders of this company was held at Shanghai, June 12th, and the following resolution was adopted: "That the Capital of the Company be reduced from Tls. 250,000 divided into 10,000 shares of Tls. 25 each to Tls. 200,000 divided into 10,000 shares of Tls. 20 each, and that such reduction be effected by returning to the holders of the 3674 shares that have been issued paid up capital to the extent of Tls. 5 per share and by reducing the nominal amount of all the shares from Tls. 25 to Tls. 20 each."

GERMAN ASIATIC BANK.—This institution will pay a dividend of 8% for the year 1907 compared with 9% for 1906 and 11% for 1905. The small dividend is due to the necessity of maintaining large reserves to meet losses following the unfavorable financial conditions in Japan and China.

TOKYO RAILWAY Co.—The directors of this company have recommended the payment of a dividend of 7% per annum for the first half year.

TOKYO STOCK EXCHANGE.—A dividend has been declared by this institution for the first half year, 1908, at the rate of 10% per annum.

TOKYO ELECTRIC LIGHT Co.—The semi-annual meeting of this company was held June 20th and a dividend of 10% was authorized. The net profit for the year was yen 773,283 and yen 52,411 was carried forward.

OSAKA SHOSEN KAISHA.—The following was the report submitted by the board of directors of this company at the meeting held June 25th:

	Yen.
Net Profit.....	389,907.050
Brought forward.....	13,643.985

Placed to Reserve.....	25,000.000
Placed to Reserve for deterioration of vessels and machinery.....	10,000.000
Placed to special Reserve.....	20,000.000
Dividend at the rate of 15% per annum.....	315,000.000
Special Dividend at the rate of 10% per annum.....	25,000.000
Carried forward.....	12,601.635

DOMESTIC TRANSPORT Co.—At the semi-annual meeting held last month a final dividend of 10% was directed paid making in all 13% per annum for the term.

CONSOLIDATED MALAY RUBBER Co., LIMITED.—The net profit for the year 1907 was £6,373 out of which a dividend of 10% was directed paid. The issue of 7,000 new shares at a premium of 10s. a share was also authorized to extend operations.

SUNGEI KAPAR RUBBER Co.—The report for the year 1907 showed a profit of £1,419 of which £201 was written off and the balance carried forward.

SELANGOR RUBBER Co., LIMITED.—A final dividend of 4d. on the fully paid up shares and 3d. on the shares 1s. 6d. paid on Dec. 31, making the total dividend for the year 10d. per share on the fully-paid shares of 2s. each and 6d. per share on the part-paid shares, or at the rate of 41.6 per cent. They have further decided to write off the sum of £1,200 against planting account and £300 as depreciation on buildings and machinery.

BORNEO-SUMATRA TRADING Co.—This company has authorized the payment of a dividend of 6% for the year.

BESITIO AGRICULTURAL Co.—A dividend of 15% has been announced by this company for year 1907.

NETHERLANDS-INDIA AGRICULTURAL Co.—This company has declared a dividend of 7.66% on the shares and fl. 18.47 on the profit shares. The dividend for 1906 was 6.668% and fl. 11.58 a share.

PONDOK GEDEH AGRICULTURAL Co.—A dividend of 6% was declared by this company for the year 1907.

DELI AGRICULTURAL Co.—At the annual meeting of this company a dividend of 5% was declared for the year.

PETJANGAAN AGRICULTURAL Co.—This company paid a dividend of 15% as a result of its operations for 1907.

THE CONSOLIDATED MALAY RUBBER ESTATES LIMITED.—In their report for the year ended December 31st, 1907, the directors of this company recommended the payment of a dividend of 10% and to carry forward after writing off preliminary expenses £514.

BELAT TIN MINING Co.—At the general meeting of this company a dividend of \$1 a share equal to 10% was directed paid.

S. MOUTRIE & Co., LIMITED.—At the meeting of the shareholders of this company a dividend of 8% was directed paid and a most satisfactory report for the year adopted. One pleasing feature of the meeting was the vote of \$1,000 to the widow and daughter to the late deceased manager, Mr. Moutrie.

DAMANSARA (SELANGOR) RUBBER Co., LIMITED.—Advices from London are to the effect that this company has declared a final dividend of 3% making 5% for the year.

SHANGHAI ELECTRIC & ASBESTOS CO., LIMITED.—At a meeting of this company held May 28th, a final dividend of 4% was authorized making 8% for the 11 months ended February 29th, 1908.

THE HARPENDEN (SELANGOR) RUBBER CO., LIMITED.—At the fifth annual meeting a dividend of 4% on paid up shares was authorized and at an extraordinary meeting it was decided to go into liquidation with a view to converting the company into a sterling organization.

BANK OF INDO-CHINE.—At the annual meeting of this institution a dividend of f. 47.50 was declared for the year 1907.

TINGHA CONSOLIDATED TIN MINES.—Two quarterly dividends at the rate of 10% per annum were paid by this company for the half year ending January 31st, 1908.

NEDERLANDSCHE HANDEL-MAATSCHAPPIJ.—This company declared a dividend of 8% for the year 1907.

NIPPON YUSEN KAISHA.—This company declared a dividend of 10% and a special dividend of 2.5% per annum for the term just ended. The following is the report and accounts submitted by the board of directors:

Gross receipts	14,416,288
Disbursements	14,948,890
Net profit	1,467,396
Brought from last term	307,882

Total 1,775,278

To legal reserve	73,369
To bonus	71,358
Dividend (10% per annum)	1,100,000
Special dividend (2% per annum)	200,000
Carried to next account	310,551

At the extraordinary general meeting, subsequently held, the following resolutions were submitted and passed with one accord:—(1) That the present Tokyo branch be converted into a sub-branch; (2) That the branch offices at Osaka, Yokkaichi and Fusan and sub-branches at Nemuro, Aomori, Nagoya and Gensan be discontinued; (3) That the fixing of the date of the enforcement of the above decisions be commissioned to the board of directors. The intention to close Nagasaki, Chemulpo and Tientsin branches has been abandoned owing to the authorities' advice and suggestion of the local people.

THE SHANGHAI DOCK & ENGINEERING CO., LIMITED.—This company has declared a final dividend of Tls. 2.50 a share making Tls. 5.00 in all for the year ended April 30th, 1908. The following is a copy of the directors' report and statement of accounts:

To the Shareholders of the Shanghai Dock and Engineering Co., Ltd.

Gentlemen.—The Directors submit herewith their Report with Statement of Accounts made up to April 30th last.

The net profit for the year ended on the 30th April, 1908, including the amount brought forward from last year, and after paying all charges and allowing for all known liabilities, amount to Tls. 309,742.98.

After deducting the Interim Dividend of 2½ per cent on 55,200 Shares paid in January this year, which absorbed Tls. 138,000, there remains for distribution the sum of Tls. 171,742.98. This amount the Directors recommend to be dealt with as follows, viz:—

A Final Dividend of Tls. 2.50 per Share	Tls. 138,000.00
Amount to be carried to New Account	33,742.98
	Tls. 171,742.98

In accordance with par. 98 of the Memorandum and Articles of Association, two of the Directors, Messrs. A. M. Marshall and C. Michelau, retire, but, being eligible, offer themselves for re-election.

The accounts have been audited by Messrs. J. E. Bingham and F. N. Matthews, who retire, but, being eligible, offer themselves for re-election.

Dr.	
PROFIT AND LOSS ACCOUNT	
1908. January 21st.	Tls.
To 2½% Interim Dividend on 55,200 Shares	138,000.00
1908. April 30th.	
To Depreciation on Buildings on leased Premises	2,000.00
To Property destroyed, lost or reduced in value	3,798.16
To Allowance for bad and doubtful debts	1,190.74
To Directors', Auditors' and Hongkong Agency Fees	8,400.00
To Balance	171,742.98
Tals.	325,231.88

Cr.	
1907. May 1st	Tls.
By Balance carried forward	10,459.95
1908. April 30th.	
By Transfer Fees collected during year	272.02
By Interest received and estimated accrued on Investments, Deposits and Current Account with Bank, less Interest on Cash Deposits with Company	16,586.23
By Transfer from Working Account	297,913.68
Tals.	325,231.88

BALANCE SHEET

LIABILITIES

1908. April 30th.

CAPITAL ACCOUNT

Registered Capital—	Tls.
55,700 Shares at Tls. 100	5,570,000.00
Subscribed Capital—	
55,138 Shares issued at Tls. 100 fully paid up	5,513,800.00
62 Shares at Tls. 100 due Members of the late S. C. Farnham, Boyd and Co. Ltd., to be issued on application	6,200.00

55,200 Shares 5,520,000.00

RESERVE FUND

(Taken over from the late S. C. Farnham, Boyd and Co., Ltd.) 1,000,000.00

UNPAID DIVIDENDS

(Taken over from the late S. C. Farnham, Boyd and Co., Ltd.) 5,224.00

The Shanghai Dock and Engineering Co., Ltd. 18,445.50

23,689.50

SUNDRY CREDITORS

Local Bills, etc.	37,258.17
Employees' Deposit Account	3,706.22
Directors', Auditors', and Hongkong Agency Fees	8,400.00

49,364.39

Suspense Account 2,959.35

PROFIT AND LOSS ACCOUNT

Balance at Credit of this Account 171,742.98

Tls. 6,767,756.22

ASSETS

1908. April 30th. Tls.

PROPERTY ACCOUNT

Land:	m.	f.	l.	h.
"Old" Dock as per Title Deeds	20	2	8	9
"Cosmopolitan" Dock as per Title Deeds	162	2	4	1
"International" Dock as per Title Deeds	127	6	7	3
"Tunkadoo" Dock, as per Title Deeds	35	6	9	5
"New" Dock, as per Title Deeds	48	6	4	3
Pootung Engine Works, as per Title Deeds	54	3	1	8
Total	448	8	5	9

Value Tls. 1,729,519.03

DOCKS, BUILDINGS, WHARVES AND WALLS

"Old" Dock	1,239,900.27
"Cosmopolitan" Dock	
"International" Dock	
"Tunkadoo" Dock	
"New" Dock	
Pootung Engine Works	

HARBOUR MOORINGS 23,355.72

Buildings:

At all Establishments 469,991.85

Machinery and Plant:

At all Establishments 1,127,721.91

Tools, Patterns and Gear

At all Establishments 105,808.51

Steamers, Launches and Vessels 211,900.00

Pontoons, Steam Dredgers, Pile-drivers, etc. 72,372.92

Furniture:

Office and Drawing Office Furniture, drawing materials and appliances, plans, etc. 19,390.00

STOCK ACCOUNT

Value of materials on hand 1,108,783.17

SUNDRY DEBTORS

Accounts in course of collection, etc. 218,256.40

Value of completed portion of unfinished work on hand, less installments received on account 24,156.42

Suspense Account:

(Including Tls. 12,003.45 secured by a Promissory Note dated 7th September, 1905) 14,586.05

INVESTMENTS AND DEPOSITS

6 North-China Insurance Co., Ltd. Shares

22 Hall and Holtz, Ltd. do

18 Yangtze Insurance Association Ltd. do

1 Hongkong Fire Insurance Co., Ltd. do

10 Canton Insurance Office, Ltd. do

128 Shanghai Mutual Telephone Co., Ltd. do

5 Shanghai Ice C. S. & R. Co., Ltd. do

100 Kochien T'p't'n & Tow Boat Co., Ltd. do

Tls. 17,690.41

NOTE:—There is a small contingent Liability for uncalled Capital on certain of above investments.

Hongkong & Shanghai Banking Corporation 300,000.00

Telegram Deposit 175.00

317,865.41

CASH

In hand Tls. 104.66

On Current Account with Hongkong & Shanghai Banking Corporation 84,137.90

84,242.56

Tls. 6,767,756.22

Shanghai, 16th June, 1908.

JAS. H. OSBORNE,
Secretary.

JOHN PRENTICE,
DAVID LANDALE,
C. MICHELAU,
R. S. F. MCBAIN,
H. A. J. MACRAY,
A. M. MARSHALL,
JAMES JOHNSTON,
Directors.

We have examined the above Balance Sheet with the Books and Accounts of the Company for the year ended 30th April, 1908. The stocks of Materials and Machinery, Plant and Tools have been certified by the Secretary and Manager respectively; practically no depreciation has been provided on the Company's Assets, but we are informed that same have been efficiently maintained out of revenue. Subject to this, the above Balance Sheet is, in our opinion, a full and fair Balance Sheet properly drawn up so as to exhibit a true and correct view of the Company's affairs as shown by the Books of the Company.

J. E. BINGHAM,

F. I. A. (N. Z.).

F. N. MATTHEWS, C. A.,
Auditors.

FAREASTERN ENGINEERING, CONSTRUCTION, COMMERCIAL AND FINANCIAL NEWS

ELECTRIC RAILWAYS, LIGHT, POWER, TELEGRAPHS, TELEPHONES, AIRSHIPS, ETC.

TIENTSIN-CHEFOO CABLE.—The break in this line was located last month near Chefoo and repairs were promptly made.

F. M. S. MOTOR SERVICE.—The service connecting Ampang and Kuala Lumpur, recently discontinued, has been renewed.

TIENTSIN ELECTRIC'S NEW HOME.—The new office building of the staff of this company was occupied at the first of the month.

KEIHIN ELECTRIC RAILWAY EXTENSION.—The Japanese government has sanctioned the extension of this line from Shinagawa to Aoyama.

CHINESE NAVY INSTALLATIONS.—An order has been placed with Messrs. Wilks & Jack for a complete electric installation for another Chinese gunboat.

MANILA ELECTRIC LIGHTING.—The city of Manila increased its estimate for lighting for 1908-09 to \$100,000 against \$50,000 the previous year. This sum was to provide for the installation of 480 arc lights.

RANGOON ELECTRIC COMPANY.—This organization has just completed its second year with the announcement that the street lighting system and the final section of the tramway track have been installed.

SHINTATSU TRAMWAY COMPANY.—This line connecting Fukushima and Jisska and built by the Shintatsu Tramway Co. was inaugurated on June 1st. The company has been incorporated with the Dai Nippon Tramway Co.

CHINESE TELEGRAPHS.—The administration has ordered all the land lines in Honan and Chili, connecting Hsinyangchou and Paotingfu, to be shifted so as to run parallel with the route of the Peking-Hankow Railway.

RANGOON MOTOR SERVICE.—Permission has been granted the firm of Messrs. P. Michael & Co. of Rangoon to put in a motor service for the transportation of goods between the go-downs and wharves. A 30-h. p. car will be used.

SHANGHAI-TIENTSIN CABLE.—The Great Northern Telegraph Co. found the break in the cable about 8 miles from Shanghai and repaired it, last month. It appears that about half-a mile of cable had been cut out and stolen.

PEKING ELECTRIC TRAMWAYS.—A foreign company has made application to the government of Peking for a franchise to install an electric railway system at Peking with provision for its redemption by the government at the end of 10 years.

CHEFOO-PORT ARTHUR CABLE.—According to an agreement between Tokyo and Peking the cable between these two points will be the joint property of the two governments, the Chinese collecting all the tolls at the Chefoo end and the Japanese doing likewise at the Port Arthur end.

SINGAPORE-JOHORE CABLE.—Superintendent Bucknell of the F. M. S. Telegraphs and Telephones is in charge of the laying of the cable between these two points under the straits. Linked with the land wires, connection will be effected between Penang and Singapore by the peninsular through line.

FENGTIENG TELEGRAPHS.—According to the agreement between the Japanese and Chinese governments, the Japanese telegraph line must be installed along the South Manchurian Railway only and the Chinese language must be used exclusively in the transmission of messages in the trading ports of Manchuria.

MUSASHI ELECTRIC RAILWAY.—The work of construction has commenced on the new line that is to connect Hiroso, Tokyo, and Harasuma and it is expected to be finished before the exposition. In addition to the line just mentioned, the company has been granted a charter for the construction of a branch line connecting Chofu and Kamata via Ikegama.

ANGLO-JAPANESE GENERATING COMPANY.—On May 29th a meeting of the promoters of this extensive scheme which has been hanging fire was held at Tokyo and it was given out that arrangements for financing the project were concluded. The British capitalists will put up over eleven millions and the Japanese six millions. The company has completed a contract to supply power to many enterprises including the city of Tokyo.

CHINESE TELEGRAPH MATERIAL.—The Peking government has decided to establish a factory at Tientsin for the manufacture of materials required for the extension of the Chinese telegraph service. With the nationalization scheme, it is estimated that over 10,000 miles of line will be included in these extensions. The first extension in the south starts at Szemao and will be carried to Hokou, Kwangnan and Kaifu, in the Yunkwei provinces.

UNDERGROUND WIRING IN MELBOURNE.—The city of Melbourne has appropriated £48,000 for constructing conduits for the purpose of placing all telephone and telegraph wiring underground. The tunnels will be bored 25 feet below the surface of the streets so as to be clear of electric light cables, gas, water and sewerage pipes. They will be 6 ft. 6 in. high and 4 ft. 6 in. wide so that workmen will have easy access for repair work, says the *Australasian Hardware Journal*.

TELEPHONE TENDERS INVITED.—The Postmaster General of Western Australia has advertised for bids on the following, which will be opened September 7th: 1 common battery switchboard of nine sections in all (for Fremantle), together with all associated frames, racks, power plant, and parts, as per specification No. 204; 650 telephone wall sets, 150 telephone table sets, 800 protectors, 90 extension switch and bell sets (complete), 30 switchboards for four lines, 20 switchboards for six lines, 5 switchboards for 12 lines, 5 switchboards for 24 lines, 20 telephone wall sets for party lines, 10 telephone table sets for party lines. Tenderers must state the country in which the articles tendered for have been made or produced, and, in the case of manufactured articles, where the material has been made or produced.

RAILWAYS AND RAILWAY SUPPLIES.

HONAN RAILWAYS.—The Pien-Lok Railway in Honan was opened to traffic on June 13.

HOKUYETSU RAILWAY.—The purchase price of this line has been fixed at 7,186,000 yen.

GOYU-TOKOHASHI RAILWAY.—The doubling of this line was completed in time for the opening to traffic June 1st.

HITOYOSHI RAILWAY.—The line between Hitoyoshi and Yatsushiro was opened to traffic by the government on June 1st.

NAKATSU-SAKASHITA RAILWAY.—This new line of the Central Western system of Japan will be completed by the middle of July.

CANTON-HANKOW RAILWAY.—The most difficult part of the Southern section of this line, that as far as Mong-fukong, has been surveyed.

TSITSIHAR-AIGUN RAILWAY. The survey of this route is under way and it is estimated that construction may begin next spring. It will take over four years to complete the road.

SOUTHERN MANCHURIAN RAILWAY LOAN.—The amount raised by the floating of the loan for £2,000,000 will be spent reconstructing the Mukden-Antung line and the Kirin-Changchun line.

SHANGHAI-SOOCHOW-NINGPO RAILWAY LOAN.—The Chinese 5% railway loan has been oversubscribed and the closing price showed three-quarters of one per cent. premium. This issue was for £1,500,000.

HONAN RAILWAY ENTERPRISE.—Two new lines are being agitated by the natives of Kaifengfu, Honan, one to connect that city with Chinanfu in Shangtung, and the other to connect with Chengtingfu.

HOANGHO RAILWAY BRIDGE.—It is not improbable that this river will be bridged by the Pukow-Tientsin Railway at Ai-shan opposite Waishan where the river is about two li broad with an average depth of 20ft.

KALGAN-KULUN RAILWAY.—The extension of the Peking-Kalgan railway from Kalgan to Kulun and thus connect the capital with Mongolia by rail has been the subject of favorable discussion by the authorities at Peking.

SEOUL-FUSAN RAILWAY.—On the 30th of June the government of Japan will turn over to the administrators of this company public loan bonds to the amount of 20,123,800 yen, the price of the railway as appraised by the centralization board.

SOUTH MANCHURIAN RAILWAY.—The Pullman coaches arrived for this road during June and it is expected that by August American trains comprising first class coaches, sleepers, dining and parlor coaches will be running regularly over the line.

TSINPU RAILWAY SURVEY.—According to the *Peking and Tientsin Times* the price asked by the German engineers for the plans and specifications of this line has been considered exorbitant and China proposes to make new surveys. The price asked was Tls. 200,000.

SHANGHAI-HANGCHOW RAILWAY.—If the construction continues without any delays the line will be completed next winter, according to the best expert advice. The section to Chang-an is expected completed by the end of this month and to Kiahsing early in the fall.

JAVA RAILWAYS.—The Dutch government has appropriated the sum of twenty million guilders to be expended in railway extensions in the colony and it is expected that when completed, the distance between Batavia and Sourabaya will be lessened by one day's travel.

TIENTSIN-PUKOW CONSTRUCTION. The sites for the railway depots at Pukow have been selected and construction will begin in August. The Tientsin depot will be constructed near the depot of the Imperial Railways of North China and the shops and warehouses in the same locality.

JAPANESE IMPERIAL RAILWAYS.—Statistics show that the government railways of Japan employ 39,427 vehicles. The figures include 1,919 locomotives, 4,989 passenger cars, and 30,841 freight cars. Besides these there are 1,427 cars for construction use and 551 private cars for oil conveyance.

CANTON RAILWAY CONSTRUCTION.—The contract of the Canton government to construct the Canton-Wampoa Railway and the Waichow-Chinchow Railway

is not being fulfilled as anticipated. The work on the Chinese section of the Hongkong Canton section is the only evidence of activity to date worthy of note.

PEKING-KALGAN RAILWAY.—Taotai Chan Tien-yu, chief engineer in charge of construction of this line, reports that he expects to complete the line in 1909. The tunnel near Chu-yungkuan is expected to be finished in the fall. The steel and bridge material will soon be delivered at Nankow. Russian material will be used.

INDIAN RAILWAY ACTIVITY.—The estimate of £20,000,000 for the annual expenditure is meeting with favor by the Indian Railway Committee and the *London Times* remarks that the expenditure is not only justifiable but that the construction of 100,000 miles of railways in India would not suffice for future requirements.

TIENTSIN-PUKOW SURVEY.—The director general and the chief engineer is now busy on the survey of this line and will pass through Chuchow, Ting-yuen, Fengyang, Lingpih and Suchow, all in Anhui province; then through Hsueh-chow-fu, Hsiao-hsien, and Tungshan in Kiangsu; and to Yihhsien and Hangchow in Shantung.

TRANS-SIBERIAN RAILWAY.—Cabled advices from London state that the Duma has almost unanimously approved the scheme to double the line from Omsk to Karytska and 24,000,000 roubles are made available for that purpose. Authority is also extended to increase the rolling stock to a capacity of forty trains daily over the extended system.

SHANGHAI TO NEWCHWANG DIRECT.—Arrangements have been made with the Imperial Railways of North China whereby the Chinese Engineering & Mining Co., Ltd., may issue tickets direct from Shanghai to Newchwang and the company announces that the most direct route to Peitaiho is via Chinwangtao at which port their steamers call regularly.

AMOY RAILWAY.—The construction of the road connecting Amoy and Chiang-chin, a distance of 30 miles, is not progressing as rapidly as anticipated. One correspondent writes that at the present rate of progress it will take about twelve years to complete the work. The entire project is being supervised by Chinese and the capital is exclusively Chinese.

SHANTUNG RAILWAYS.—The branch line connecting Chi-chia-chwang and Te-chow and incidentally the Tsinpu line and the Luhan line will be constructed by French and Belgian contractors and upon its completion it may be extended as far as Taiyuanfu making direct connection from the Shansi capital to Kiaochow. The cost of the first section referred to is estimated at three million taels.

BURMA RAILWAY EXTENSION.—According to *Railways*, the Burma government will shortly authorize the construction of an extension of the Henzada-Bagayet line via Donabyu which, when completed, will traverse a distance of 94 miles. The proposed extension will be an improvement of the East Dagaloop Railway and there will be a branch from Donabyn to Pantanaw of about 24 miles. The extension will commence at Henzada, 85 miles from Bassein. There will be altogether 229 bridges of all kinds, 24 being classed as major bridges, the most important on the line being one over Akyab river, which is estimated to cost about a lakh of rupees. The whole project, the Henzada, Donabyu, Bagayet and Donabyu Pantanaw lines, is estimated to cost Rs. 83,00,000.

PUBLIC WORKS, DOCKS, WHARVES, ETC.

PEKING WATER TOWER.—The water tower for the Peking waterworks outside Teng Chi Men is now under construction.

BANGKOK DOCKS.—The *Bangkok Times* states that this company has booked over Ticals 250,000 of contracts during the first half of the year.

AMUR RAILWAY BRIDGE.—It is reported that the bridge proposed to span the Amur river for the Amur railway will be the longest of its kind in the world and will cost 5,000,000 roubles.

FOOCHOW DOCKYARD.—The scheme is on foot to extend and improve the Foochow Dockyard with a view to put the plan in shape so that China may build the ships of her new navy here.

SEOUL WATERWORKS.—The tests of the water supply system for fire protection has been successful. The water was turned on all over the city the latter part of April and there has been a steady demand for connections.

BATAVIA HARBOR IMPROVEMENTS.—Plans have been concluded for the expenditure of 6,500,000 guilders in the deepening of the harbor at Tanjong Priok, the lengthening and broadening of the quays and the construction of a new railway station.

ZAMBOANGA WATERWORKS AND ELECTRIC LIGHTING.—A company is being formed, says the *Zamboanga Herald*, for the purpose of installing a water supply and generating plant to provide Zamboanga with water and lighting. The capital stock is P200,000.

FOOCHOW DOCKYARD.—Plans are being considered at Peking providing for the extension and the improvement of the equipment of the dockyard there with a view to having the greater portion of the warships for the new navy built there by the government.

NEW BANGKOK DOCKYARD.—A number of Siamese officials and Chinese merchants are reported to be interested in the promotion of a company having for its object the installation of a large shipbuilding and repairing plant at Bangkok. The management will be European.

TSINGTAU OBSERVATORY.—The German government has appropriated \$100,000 to be expended in the establishment of a new meteorological and astronomical observatory at Tsingtau which will be equipped and be kept in touch with the observatories at Shanghai, Hongkong and Manila.

OSAKA IRON WORKS COMPANY DOCKS.—This company has completed plans for the construction of a drydock of a capacity to accommodate steamers of 8,000 tons and which will be completed in less than three years. This dock will be located at the mouth of the Ajikawa River near the Sakurajima yard, Osaka.

TARIEN DOCKS.—The Kawasaki Dock Company has taken over the old Russian docks at this point and proposes to equip it with the latest machinery so as to accommodate vessels of 6,000 tons. About yen 800,000 will be expended by the company in this direction. The company will also install large iron and steel works there.

MOJI DRY DOCK.—The government has granted permission to the Franco-Japanese Syndicate to construct a pier at Moji and dredge the harbor to accommodate vessels of 20,000 tons and also to install machinery for unloading and loading coal and other freight. The syndicate has received permission to construct a drydock at that point.

DREDGING GRAND CANAL.—It is proposed to spend 600,000 taels for the proper dredging of this important waterway and the building of substantial embankments over the entire length of 240 miles, the cost to be borne by the provinces of Chihli and Shantung. The purpose is to make the canal available for launches and small steamers to carry freight and mails as well as passengers between Kiangsu and Chihli.

YOKKAICHI HARBOR IMPROVEMENTS.—A scheme is under consideration for the construction of a breakwater at Asahi Point and to deepen the harbor to an average of 25 feet, the estimated cost of which is about 1,000,000 yen. This work will take over six years to complete. The municipality of Yokkaichi contemplates reclaiming a large part of the foreshore and the construction of a short railway in connection with the improved port.

FLOATING DOCKS AT KOBE.—Two more large floating docks are to be built at Kobe. One now under construction by the Mitsui-Bishi Yard at Wada will accommodate a vessel of 10,000 tons, while the Kawasaki Dockyard has a scheme on foot to build a floating dock that will take a steamer of 15,000 tons. This will be set up off the company's timber yard adjacent to the Kawasaki Customs landing-place. There a breakwater about 1,000 feet long will be constructed to protect the floating dock. Application has already been made to the Kencho for a charter to enter upon work of reclamation there as required for the construction of the dock. The steel used will be obtained from the Kure Naval Arsenal, and the rest of the materials will be made at the dockyard.—*Yokohama Journal of Commerce.*

SHIPBUILDING, GENERAL MARINE AND FISHERIES.

KAMO MARU'S TRIAL TRIP.—This vessel recently launched by the Mitsui-Bishi Dockyard made her first steam trial, June 10th.

KIAOCHOW FISHING INDUSTRY.—One week's work last month resulted in 500,000 pounds of fish being caught, dried and salted for the Shantung interior trade.

MORGUI FISHING BANKS.—A Rangoon company has made application for a concession from the Burma Government of the oyster banks at these islands.

FOOCHOW FISHERIES.—The present concession is held by Japanese and the announcement has been made that, at its expiration, no further rights will be extended foreigners.

LIAO RIVER MOTOR SERVICE.—Eight motor boats to be used in navigating the Liao River were recently received and put in operation by the Chinese officials at Newchwang.

MARINE INVENTION.—The Tenyo Maru is testing an apparatus invented by Captain Makimura, designed to indicate in advance possible dangers arising from the bottom of the sea.

NEW AUSTRALIAN LINE.—The government of New South Wales has advertised for tenders for the establishment of a line of steamers between Sydney, Melbourne and Shanghai.

CANTON-KOWLOON RAILWAY LIGHTERS.—Two lighters are under construction at Messrs. Wilks & Jack's yards at Taikoktsui. This firm recently supplied four lighters for the British section.

NEW STEAMER FOR MACAO RUN.—The Hongkong, Canton and Macao S. S. Co. has purchased the steamer Hoi Sang from Chi Wo & Co., the latter agreeing to retire their other steamers from this run.

U. S. A. TRANSPORTS.—The United States government has purchased the steamers Shawmut and Tremont of the Boston line and these vessels will be used in connection with the construction of the Panama Canal.

CHEFOO S. S. Co.—A company has been organized at Chefoo for the purpose of instituting a steamship service connecting that port, Korean and Japan ports and Vladivostok. The vessels are to fly the Chinese flag.

SIAMESE TORPEDOERS.—The four torpedoers ordered by the Siamese government and constructed by the Kawasaki Dockyard of Kobe are expected ready for sea this month. The last vessel was launched June 12th.

DALNY'S SHIPPING TRADE.—The number of vessels which entered the port of Tairen during May was 148, with a total tonnage of 192,388. Of these, 119 were Japanese, 12 Chinese, 11 British, 4 Norwegian, and 2 German.

SIAMESE NOBLES TO STUDY SHIPBUILDING.—The King of Siam has sent nine Siamese princes and nobles, including his younger brother, to Kobe where they will study in the morning and work in the Kawasaki Dockyard in the afternoon, each day.

TWO NEW JAPANESE PORTS.—The newly opened ports of Yakkaichi and Shimidzu have been placed on the list of ports of call of the Portland and Asiatic S. S. Co. The Arabia sailing from Hongkong last month for Portland was the first to make these two ports.

NEW KOREAN S. S. Co.—The South Korean Steamship Co. is the name of an organization being promoted for the purpose of engaging in the coastwise trade of southern Korea. The promoters have asked the Korean government for a subsidy of 30,000 yen annually for three successive years.

HONGKONG MARU FLOATED.—This vessel which went ashore on the mud bank off Block House Island near Shanghai, June 9th, was refloated successfully and towed to safe anchorage at Woosung June 16th. No indications of serious damage could be found, but she was sent to Nagasaki to be docked.

JAPANESE SARDINES.—The export trade of sardines from Japan did not exceed 30,000 yen in value last year but there is noted an ever increasing demand for the product in America. The Japan Canning Co. of Nagoya has been in successful operation in this line for several years and the management is greatly encouraged.

AMERICAN TURBINES FOR JAPANESE NAVY.—Four steam turbines of 12,000 h. p. each have been ordered by the government from the Foreshore River Shipbuilding Company of Quincy, Mass. Two of these will be installed in 23 knot cruisers now under construction and the other two are for battle ships to have a speed of 21 knots.

O. S. K. S. S. Co AND CHICAGO, MILWAUKEE & ST. P. R. R.—A tentative agreement has been entered into between these two companies for connecting services and the contract will go into effect in 1910 when the six 6,000 ton steamers will be completed and the Osaka Shosen Kaisha will put them on the run between Japanese ports and Tacoma.

PHILIPPINE PEARL FISHERIES.—The Moro province has passed an act providing that no license shall be issued to any pearling outfit to operate within the three marine league limit of the coasts of the Moro province, unless the vessels are owned by American citizens, citizens of the Philippine Islands or those who have secured the political rights of natives or to vessels owned by Philippine corporations.

MINES, MINERALS AND THE METAL TRADE

MAY TIN.—The highest price paid for tin in Perak in May was \$71.625 a pikul.

STANDARD OIL COMPANY.—This company has expended P7,000 in the purchase of a site for warehouses on Mactan Islands, Cebu.

GERMAN-CHINESE MINING Co.—A company has been formed of German and Chinese capital to develop the coal fields in Chingking, Chihli.

SUNGEI RAJA INSTALLATION.—The *Times of Malaya* announces that a dredging plant is in the course of erection on this property and it is expected to be in operation by the end of August.

KIMINGSAN COAL MINES.—Coal of a superior quality has been discovered near Kalgan and the fields which are owned by the Peking Kalgan Railway will probably be developed by that company.

TIENTSIN CEMENT MANUFACTURE.—Experts have been sent to Tientsin by the Peking authorities to experiment with the soil there with a view to making a report on its adaptability to the manufacture of cement.

TURBET SILVER MINES.—The attempt of the Russians to develop this valuable Mongolian property is meeting with opposition. The Imperial Resident has been notified by Peking to refuse permission to the Russians.

BURMA MINES, RAILWAY AND SMELTING Co., LIMITED.—This company expects to place slag, ore, etc., on the market at an early date and arrangements have been concluded with the Burma Railways for special transportation facilities.

SHANTUNG MINING SOCIETY.—This organization has made application to the Peking government for mining rights covering a belt of country extending 30 li on either side of the Tientsin-Pukow Railway line from Hsien to Ichow-fu.

ICHOW-FU COAL FIELDS.—A company is being promoted by Chinese officials for the purpose of developing the coal deposits about ten miles south-west of Ichow-fu and to build a railway for the transportation of the product to the port of Hai-Chew.

GERMAN NEW GUINEA GOLD.—Reports of rich deposits of gold have been received from this section and also in the Dutch section. Development by private enterprise is not encouraged by the governments interested and there is little promise of much activity.

FUSHAN COLLIERY.—The report of the Manchurian Railway contains the information that the railway consume 22,000 tons of coal a month from those mines, the total output being 33,000 tons and it is expected at an early date to increase the output to about 50,000 tons a month.

TUNGKWANSHAN MINES.—An effort is being made by the Anyu Mining Company and the Mitsui & Co. to reach an agreement for the joint development of these iron mines. There are some complications over the original concessions, the native of Anwei being opposed to concessions to foreigners.

SIAM MINES AND MINING.—Advices from Bangkok state that expert report on the possibilities of the mining industry in the Siam dependencies is exceptional and the rich deposits offer splendid opportunity for exploitation as soon as better transportation facilities are available in the mineral regions.

SHANSI IRONWORKS.—The governor of Shansi province and the authorities at Peking are considering the establishment of large iron works in this province with a view to developing the iron and coal deposits and with a view to providing the country with finished product in steel and also coal for railways and steamship companies.

MINDORO PLACER MINES.—A prospector from the island of Mindoro, Philippine Islands, reports valuable placer deposits about 30 miles from the pueblo of Calapan and about 1,000 feet above sea level, on the Banaby River. Samples were received at Manila last month and report also of indications of iron, platinum and silver in the geological formation.

NAMBOKU OIL COMPANY PLANT.—The refinery of this company has been completed at Yokohama. The compound covers 20,000 tsubo of which 800 tsubo is covered by the building. Nine boilers aggregating 445 h. p. have been installed and 30 distilling kettles with a capacity of 11,200 koku of oil together with twelve tanks for refined oil each of a capacity of 250 koku, complete the equipment.

AUSTRALIAN IRON AND STEEL MANUFACTURE.—The Eskbank Ironworks has been experimenting on the manufacture of steel from pig iron produced locally and the company has ordered several machines and engines from England and America to perfect this department and, with their installation, success is expected. The *Hardware Journal* announces that the operations for the last few months have been at a loss on account of the lack of proper equipment.

FINANCIAL AND MISCELLANEOUS

WEST AUSTRALIAN GRAPES.—A large consignment of grapes recently received in London brought 96 shillings a cwt.

BRITISH BEER BREWERIES Co.—The machinery for the installation of this company's plant at Singapore arrived last month.

OPEN PORT OF KALGAN.—The Grand Council has decided to make Kalgan an open port as soon as the Peking-Kalgan Railway is completed.

KIAOCHOW PARCEL POST.—The new parcel post service to this point by sea direct via Hongkong is now two shillings for parcel not exceeding 3 pounds.

KIAOCHOW SUBSIDIARY COINS.—The issue of small German coins for circulation in this section has been authorized. This issue will include nickel c. 5 and c. 10.

NEW NEWCHWANG HOTEL.—The completion of the New Astor House at Newchwang this fall will give this section one of the most modern hotels in North China.

JAVA TIMBER CONCESSION.—The Borneo company has secured a large timber concession in the province of Rebang, Java, which covers a period ending August 31, 1915.

TONKIN PAPER MANUFACTURE.—A company has been floated in France for the purpose of establishing a paper mill on a site secured at Phulang-thuong. An expert is now on the ground.

AMERICAN-JAPANESE TRADE MARK CONVENTION.—The ratification of the convention was expected by latest advices from Tokyo, to be received and ratified at Tokyo about the first of July.

JAPAN-CHINA BANK.—The organization of this bank is meeting with encouragement among Japanese bankers and it is believed will be successfully promoted. It will have a capital of 2,000,000 yen.

JAPANESE IN MONGOLIA.—A party of 200 surveyors under the direction of two Japanese military officers have been engaged during the last year in making surveys of Inner and Outer Mongolia.

PERAK IMPORTS AND EXPORTS.—The report for the first three months of 1908 shows a decrease of \$650,000 in imports, and a decrease of \$1,785,304 in exports compared with the corresponding period, 1907.

FORMOSAN SUGAR MILL.—Messrs. Bain & Co. of Anping, Formosa, are promoting a company with a capital of Yen 50,000 for the purpose of establishing a sugar mill with a capacity of 100 tons a day at Bokushikaku in Kaga province.

JAPAN-KOREA GAS COMPANY.—This company is being promoted with a capital of 3,000,000 yen. The promoters have secured options on sites at Seoul and Yongsan at reasonable rentals and the government has offered to assist the company in every way.

JAPAN'S TEA CROP.—Some damage to the crop is reported, but the exports to date have been double that of last year although the quality is slightly inferior. It is believed that the year's crop will exceed in quantity, the 30,000,000 kin exported in 1907.

CHINESE TEA EXPORT.—The *Hankow News* states that there is a shortage in tea export for the year. Up to the early part of June, 383,352 half-chests of Hankow teas have been on the market as against a total of 386,000 for last year, and 175,949 Kiukiang teas against a similar total of 180,000.

PRINTING CHINESE BANK NOTES.—The Peking authorities have authorized the establishment of a printing office for the issue of bank notes and other work for the Chinese government. It will be under the direction of the director of the National Bank of China and notes in taels and dollars will be printed.

EMPIRE HEMP MANUFACTURING CO.—This organization which was formed by the amalgamation of the leading factories of Japan report for the half-year ended December 31st, 1907, that the company turned out 1,980,475 yards of hemp and 2,894,863 pounds of hemp cord. The receipts for the term amounted to 2,140,194 yen.

RUBBER GROWERS PROTEST.—The increase of freight rates from Singapore from 50s. to 60s. a ton imposed by the Homeward Shipping Conference as well as the increase on through rates from Port Swettenham from 65s. to 75s. on rubber shipments has been made the subject of a protest by the Malaya section of the Rubber Growers' Association.

SARAWAK FINANCIAL STATEMENT.—The Gazette announces the revenues and expenditures for 1907 as \$1,441,194 and \$1,359,273 respectively. Of the expenditure, \$500,000 was expended in maintaining the civil list and \$337,000 on public works and surveys. Of the latter, \$87,000 were spent on roads and \$62,000 for waterworks. A loss was shown in the operation of the Brooktown and Sadong Collieries as well as on the plantations. The public debt of \$413,000 showing in the report of 1897 has been wiped out and a surplus is announced of \$81,921 for 1907.

AMERICA-MANCHURIA STEAMSHIP LINE

The steamer *Katuna* of the new line of steamers connecting New York and Dalny via Suez, Colombo, Singapore, Manila, Kobe, Yokohama and Muroran sailed from New York February 28th. A sufficient number of steamers will be put on this line to provide a fortnightly service. They will carry passengers and freight.

*LONDON, ENGLAND, METAL MARKET

May 29, 1908.

COPPER £ s. d. £ s. d.

* Tough cake and ingot.....	61	0	0	62	0	0
* Best selected.....	61	0	0	61	10	0
* Electrolytic.....	61	10	0	62	0	0
* Sheets and sheathing.....	71	0	0	—	—	—
* Flatbottoms.....	74	0	0	—	—	—
STANDARD { Cash.....	57	12	6	57	15	0
{ Three months.....	58	2	6	58	5	0
* Copper tubes, seamless per lb.	0	0	9	—	—	—
* Lake.....	61	10	0	62	0	0
* Less 3½ per cent. † Net.						

ALLOYS.

BRASS: Wire.....	0	0	6½	—	—	—
" Tubes (solid drawn).....	0	0	7	—	—	—
" Sheets.....	0	0	6¾	—	—	—

TIN.

English ingots, f.o.b.....	130	0	0	131	0	0
" bars.....	131	0	0	132	0	0
" refined.....	132	0	0	133	0	0
Straits..... { Cash.....	129	0	0	129	5	0
{ Three months.....	128	0	0	128	5	0
Australian spot.....	129	0	0	129	10	0
Banka (in { Cash.....	129	7	6	—	—	—
Holland { Three months.....	127	15	0	—	—	—

LEAD.

Spanish or soft foreign.....	12	16	3	13	3	9
English pig, common.....	13	0	0	13	5	0
" L. B.....	13	10	0	—	—	—
" sheet and bar lead.....	14	0	0	—	—	—
" pipe.....	14	10	0	—	—	—
" red.....	16	0	0	—	—	—
" white.....	18	0	0	—	—	—
" patent shot.....	16	0	0	—	—	—

SPELTER.

Silesian ordinary brands.....	19	10	0	20	0	0
" special brands.....	20	0	0	20	5	0
English Swansea.....	20	5	0	20	15	0
Sheet zinc.....	23	10	0	—	—	—

ANTIMONY.

Antimony Regulus.....	34	0	0	36	0	0
" Crude.....	14	0	0	15	0	0
" Ore (basis 50%).....	—	—	—	—	—	—

QUICKSILVER.

Flasks, 75 lbs. warrants.....	8	2	6	—	—	—
-------------------------------	---	---	---	---	---	---

MANGANESE.

Ore, c.i.f., U.K. ports.....	Per unit.	Per unit.	—	—	—	—
1st quality, 50 per cent and upwards.....	0	0	10	—	—	—
2nd quality, 47 per cent. to 50 per cent.....	0	0	9	—	—	—
3rd quality, 40 per cent. to 47 per cent.....	0	0	8	—	—	—

ALUMINIUM.

98-99½ per cent.....	0	1	0	0	1	3
98-99 per cent, guaranteed.....	180	0	0	190	0	0

PLATINUM.

Per oz. Troy, 110s. to 90s.; nominal and subject to negotiation.

* Mining Journal.

CURRENT NEW YORK WHOLESALE PRICES OF METALS, MINERALS, CHEMICALS, ETC.

Selected from the Engineering and Mining Journal

ABRASIVES.—	U. S. Currency.
Bort, good drill quality..... carat. \$	85.00
Carborundum, grains..... lb.	10-17
Corundum..... " "	07-10
Emery, grain..... " "	035-045
Pumice Stone, American powdered..... 100 lbs.	1 60-2 00

ACIDS.—

Hydrochloric 20°..... lb.	1.25-1.50
Nitric, 38°..... " "	4.25-4.625
Sulphuric, 66° bulk..... ton	18 00
Aluminum Sulphate Com'l..... lb.	1.10-1.75
Antimony, needle..... " "	04½-05
Arsenic, white..... " "	04-045

ASPHALTUM.—

Trinidad..... ton	28.00-30.00
California..... " "	21.00-27.00
Bleaching powder, 35%..... 100 lb.	1 25-1 00
Blue Vitriol..... " "	5.00
Bone Ash..... lb.	02½-04
Borax..... " "	045-0.525
*Caps detonating..... M	6.00-7.50

CEMENT.—

Portland, American..... 500 lbs. bbl.	1 55-1 60
Foreign..... " "	2 25-2 90
Rosendale..... 300 " "	.85
*Green Island..... 375 " "	2 65
*Alsen..... " "	2.75

CLAY, CHINA.—

American common..... lg. ton	8 50-9 00
Foreign..... " "	10.00-17.50

COALS.—

*Batan at Mines.....	3 00
*Australian.....	5 50
Copper..... lb.	12½-13
*Dynamite 40%..... " "	.20
Felspar ground best..... sh. ton	10 50-15.00
Fire Brick, American..... M	30.00-40.00
Imported..... " "	30.00-45.00

Fire clay, St. Louis Mill..... ton	2 50
*Fuse-Blasting..... 1,000 ft.	6 00-7 50
Graphite—Ceylon, finest to best..... lb.	.01-04
Lump..... lb.	.04-10
Gypsum-Fertilizer..... sh. ton	5 00
Powdered..... sh. ton	4.00-7.00
Lead..... lb.	.04-.041
Magnesite—Greece, crude, 95% lg. ton	8.00-10 00
Bricks, domes..... per M	160-200
Manganese, 90-95%..... lb.	.06½
Ore, 80-85%..... sh. ton	18.00-40.00
Mercury, export flask..... 75 lbs.	45.00

PAINTS AND COLORS.—

Litharge American P'w'd..... lb.	.06½-.06½
Ochre, Am. Com..... sh. ton	8 50-9.00
Paris green, pure, bulk..... lb.	.26
Turpentine, spirits, bbl..... gal.	.58
White lead, Am. dry..... lb.	.05½-.06
Am. in Oil..... " "	.06½-.06½
Zinc, white, Am. extra dry..... " "	.05½-.05½
Phosphates, Acid..... per unit	.65-.70
Florida hard rock..... lg. ton	10.25-10 50
Land pebble 68%..... " "	4 00-4.25
Potassium Cyanide (98-99%)..... lb.	.18-.19
Platinum Hard..... oz.	26.00
Platinum, Scrap..... oz.	16.00
Spelter..... lb.	.046-.047
Nickel..... lb.	.45-.50
*Powder, black blasting A..... lb.	.14
*Judson..... " "	14½-15½
Pyrith, Domestic Non-arsenical, lump..... unit	.11-.11½
Imported non-arsenical lump..... " "	.12½-.13
Imported, arsenical..... " "	.12-12½
Saltpeter crude..... 100 lbs.	4.50-5 00
Silica, Lump quartz..... lg. ton	5 00-6 00
Ground quartz, ordinary..... " "	10 00-15 00
Glass sand, ordinary..... " "	2.75
Silver..... oz.	.58½-.54
Sodium cyanide (100% KCN)..... lb.	.18-.19
*Steel, octagon drill..... lb.	.14
Sulphur, Louisiana prime..... lg. ton	22 00
Roll..... 100 lbs.	1 85-2 15
Flowers sublimed..... " "	2 20-2 60
Talc—Domestic..... sh. ton	15 00-25 00
Italian, best..... " "	35 00-40.02
Tin..... lb.	.81½
Zinc, at Mines..... ton	34 00-36 00
*Manila quotation.	

HEMP STATISTICS, 1st JULY, 1908.

(Courtesy of C. S. NICHOLSON, Secretary Manila Chamber of Commerce.)

Arrivals of hemp at Manila up 30th June 1908.....	346,540 Bales
Arrivals of hemp at Cebu up 30th June 1908.....	131,894 Bales
Stocks on hand in Manila and Cebu on 1st January, 1908.....	478,434 Bales
TOTAL.....	129,359 Bales
Export to all ports to date 30-6-08.....	607,793 Bales.
Local consumption estimated at.....	451,027 Bales.
	2,400 " 453,427 Bales.

Total stocks at Manila and Cebu on 1st July, 1908.....

154,366 Bales.

EXPORT OF HEMP, JUNE, 1908.

Date	Vessel	London	L'pool	Atlantic U. S.	Pacific East & California	Continent	Australia	Other Pts.	Total Bales
June	Fwd:—	141,884	51,880	131,604	22,632	24,366	7,124	16,763	396,253
" 1	Taiyuan						400		400
" 3	Den of Aerlie.....	3,100				1,415			4,515
" 5	Yuensang.....							50	50
" 6	Keemun.....				570				570
" "	Zafiro.....					955		150	1,105
" 8	I. de Panay.....		750			272			1,022
" 10	Poona.....	3,373	4,280			692			8,345
" "	Teau.....							75	75
" 13	Rubi.....	4,000							4,000
" 15	Kaifong..... Cebu		125			250		30	405
" "	Yawata Maru.....						500		500
" 16	Tremont.....				5,100				5,100
" 18	Tsinan.....						200		200
" 19	Zafiro.....					450			450
" "	Yuensang.....					50		150	200
" 20	Changsha.....							2	2
" "	Kabinga.....							114	114
" 21	Manila.....						200		200
" 22	Sungkiang..... Cebu		25					22	47
" "	Prinz Waldemar.....							154	154
" 23	Teau.....							220	220
" 24	Empire.....							108	108
" 25	Muncaster Castle.....			12,438					12,438
" "	Loongsang.....					52			52
" 27	Rubi.....							300	300
" 28	Teucer.....	4 963	5,750			500			11,213
" 30	Tringuan..... Cebu					250			250
" "	Taming.....	823	1,050			866			2,739
		158,143	63,860	144,042	28,302	30,118	8,424	18,138	451,027

FAR EASTERN STOCKS AND QUOTATIONS

Courtesy of Messrs. Kadoorie & Co., Hongkong, for June, 1908.

STOCK.	WHEN ESTABLISHED	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	ATWORKING ACCOUNT	DATE	LAST DIVIDEND.	Approximate Yield per cent. per annum at Pre-sent Quotation.	CLOSING QUOTATIONS.
BANKS.											
Hongkong & Shanghai Banking Corporation	1865	\$15,000,000	120,000	\$125	\$125	{ o £1,500,000 s £13,500,000 i £250,000 c £4,000 £150,000	\$2,000,387	31-12-07	{ Final of £2 on old and £1-10/- on new shares for 1/2 year ending 31-12-07	5 1/2	{ \$750 £78-10/-
National Bank of China, Ltd.	1891	£699,475	10) 99,925	£7	£6	{ c £150,000	\$10,223	31-12-07	\$2 (London 3/6) for 1903	...	\$51
MARINE INSURANCES.											
Canton Insurance Office, Ltd.	1881	\$2,500,000	10,000	\$250	\$50	{ i \$1,560,000 u \$219,058 £401,959	Nil.	31-12-06	\$20 for 1906	8 1/2	\$235 sellers
North China Insurance Co., Ltd.	1863	£150,000	10,000	£15	£5	{ o £125,000 s Tls. 100,000 f Tls. 48,942 £3,000,000	Tls. 204,424	30-6-07	Interim of 7/6 ex 2 1/5 1/4 for 1907	6	Tls. 77 1/2
Union Ins. Society of Canton, Ltd.	1867	\$3,100,000	12,400	\$250	\$100	{ o £90,000 f \$302,478 £129,695 £727,649	\$2,506,011	31-12-07	{ Final of \$15 making \$45 for 1906, and interim of \$30 for account 1907	5 1/2	\$790
Yangtze Ins. Association, Ltd.	1862	\$1,200,000	12,000	\$100	\$60	{ i \$1,000,000 f \$199,032 \$85,157	\$591,763	31-12-07	\$12 and bonus \$3 for 1906	9 1/2	\$152 1/2 buyers
FIRE INSURANCES.											
China Fire Ins. Co., Ltd.	1870	\$2,000,000	20,000	\$100	\$20	{ x \$1,000,000 f \$346,097 \$13,802	\$372,432	31-12-07	\$6 and bonus \$2 for 1906	8 1/2	\$92 buyers
Hongkong Fire Ins. Co., Ltd.	1868	\$2,000,000	8,000	\$250	\$50	{ f \$1,323,941	\$428,047	31-12-07	\$27 for 1906	8 1/2	\$315 buyers
SHIPPING.											
China & Manila Steamship Co., Ltd.	1882	\$750,000	1) 30,000	\$25	\$25	\$7,000	\$1,035	31-12-07	\$1 for 1906	...	\$15
Douglas Steamship Co., Ltd.	1883	\$1,000,000	20,000	\$50	\$50	{ t \$264,638 £96,988	Nil.	30-6-07	\$4 for year ended 30-6-07	11 1/2	\$37
Hongkong, Canton & Macao Steamboat Co., Ltd.	1865	\$1,200,000	80,000	\$15	\$15	{ d. i. £250,000 f \$575,000 \$ 75,279 \$ 20,000	\$16,437	31-12-07	\$1 1/2 for 2nd half year making in all \$2 1/2 for year ending 31-12-07	7 1/2	\$29 buyers
Indo-China Steam Navigation Co., Ltd. (Preferred)	1882	£600,000	{ 2) 60,000 2) 60,000	£5	£5	{ i £60,000 £270,000	£3,694	31-12-06	{ 5/- @ ex. 2-2 1/2 = \$2.24 per share for 1906	3 1/2	{ \$40 buyers \$20 buyers
Do. Do. (Deferred)	1903	Tls. 1,500,000	{ 20,000 10,000	Tls. 50	Tls. 50	Tls. 75,000	Tls. 14,510	31-12-07	{ Final of Tls. 1 1/2 making Tls. 3 1/2 for 1907	{ 7 1/2 7 1/2	{ Tls. 44 sales Tls. 52 sales
Shanghai Tug & Lighter Co., Ltd. Do. Preference	1898	£ 2,000,000	2,000,000	£1	£1	{ £400,000 £1871	£172,370	31-12-06	{ Second Interim of 1/- (Coupon No. 9) for a/c 1907	4 1/2	45/- buyers
"Shell" Transport & Trading Co., Ltd.	1898	\$200,000	{ 10,000 10,000	\$10	\$10	{ i \$65,000 \$47,221	\$98	30-4-08	{ \$1.00 for year ended 30-4-08	{ 4 3 1/2	{ \$25 \$15
"Star" Ferry Co., Ltd.	1900			\$10	\$5						
Taku Tug & Lighter Co., Ltd.	---	Tls. 1,500,000	12) 30,000	Tls. 50	Tls. 50	{ d Tls. 140,000 e Tls. 609,255 i Tls. 100,000 j Tls. 116,000 q Tls. 17,142	Tls. 6,869	31-12-07	Final of Tls. 2 1/2 making Tls. 5 for 1907	12 1/2	Tls. 49 sellers
REFINERIES.											
China Sugar Refining Co., Ltd.	1878	\$2,000,000	20,000	\$100	\$100	{ o \$32,538 e \$450,000 r \$56,848	Dr. \$279,371	31-12-07	\$8 for year ending 31-12-06	...	\$130
Luzon Sugar Refining Co., Ltd.	1882	\$700,000	7,000	\$100	\$100	none	Dr. \$135,132	31-12-07	\$3 for 1897	...	\$ 22
Perak Sugar Cultivation Co., Ltd.	---	Tls. 350,000	7,000	Tls. 50	Tls. 50	Tls. 100,000	Tls. 9,173	31-8-07	Tls. 4. (8%) for year ending 31-8-06	...	Tls. 82 1/2
MINING.											
Chinese Engineering & Mining Co., Ltd.	1901	£1,000,000	1,000,000	£1	£1	{ d £150,000 h £12,289	£11,556	28-2-07	{ Interim of 1/6 (Coupon No. 10) for a/c 1908	7 1/2	Tls. 15 1/2
Raub Australian Gold Mining Co., Ltd.	1892	£200,000	{ 150,000 50,000	£1	18-10 £1	£4,873	Dr. £11,358	31-3-07	No. 12 of 1/- = 48 cents	...	\$7
DOCKS, WHARVES AND GODOWNS.											
Fenwick (Geo.), & Co., Ltd.	1889	\$450,000	18,000	\$25	\$25	\$53,601	\$3,726	31-12-07	\$1 1/2 for year ending 31-12-06	...	\$13
Hongkong & Kowloon Wharf & Godown Co., Ltd.	1886	{ \$3,000,000 }	{ 60,000 }	\$50	\$50	{ t \$550,000 £26,806 £40,000	\$3,556	31-12-07	{ Final of \$1 1/2 making \$3 1/2 for 1907	7	\$50
Hongkong & Whampoa Dock Co., Ltd.	1866	\$2,500,000	50,000	\$50	\$50	{ i \$68,699 £150,000	\$441,442	31-12-07	Final of \$4 making \$8 for 1907	7 1/2	\$103
Shanghai Dock & Engin'g Co., Ltd.	1906	Tls. 5,570,000	13) 55,700	Tls. 100	Tls. 100	{ Tls. 1,000,000 b Tls. 697,257 r Tls. 75,000 e Tls. 125,000	Tls. 10,459	30-4-07	Int. of Tls. 2 1/2 for 6 months ending 31-10-1907	6	Tls. 82 sales
Shanghai & Hongkew Wharf Co., Ltd.	1902	Tls. 3,600,000	36,000	Tls. 100	Tls. 100		Tls. 22,626	31-12-07	{ Final of Tls. 9 making Tls. 17 for 1907	7 1/2	Tls. 220 buyers
LANDS, HOTELS AND BUILDINGS.											
Anglo-French Land Investment Co., Ltd.	1906	Tls. 2,500,000	3) 25,000	Tls. 100	Tls. 100	Tls. 25,000	Tls. 6,531	29-2-08	Tls. 6 for year ending 29-2-08	6	Tls. 101 sales
Astor House Hotel Co., Ltd.	1901	\$750,000	4) 30,000	\$25	\$25	\$30,000	\$10,908	30-6-07	\$2 1/2 for year ending 30-6-07	11	\$20 1/2 sellers
Astor House Hotel, Ltd. (Tientsin)	---	Tls. 200,000	4,000	Tls. 50	Tls. 50	{ e Tls. 35,000 Tls. 10,000	Tls. 1,013	28-2-0	20 per cent. for 1906	...	Tls. 60
Central Stores, Ltd.	---	\$751,845	16) 50,123	\$15	\$15	n. \$1,000	\$9,178	31-12-06	\$1.80 for 1906	...	\$12 buyers
Hongkong Hotel Co., Ltd.	1866	\$600,000	12,000	\$50	\$50	{ r \$648,975 £7,000	\$252	31-12-07	Final of \$3 1/2 making \$7 1/2 for 1907	7 1/2	\$95
Hongkong Land Investment & Agency Co., Ltd.	1889	\$5,000,000	50,000	\$100	\$100	e \$250,000	\$36,915	31-12-07	{ Final of \$3 1/2 making \$7 for year ending 31-12-07	7	\$100 sellers.
Humphreys' Estate & Finance Co., Ltd.	1887	\$1,500,000	150,000	\$10	\$10	{ i \$217,426 e \$50,000	\$4,621	31-12-07	70 cents for 1907	1	\$10 1/2

FAR EASTERN STOCKS AND QUOTATIONS—(CONTINUED.)

STOCKS	WHEN ESTABLISHED	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	WORKING ACCOUNT	DATE	LAST DIVIDEND	Approximate Yield per annum at Pre-sent Quotation.*	CLOSING QUOTATIONS
Kowloon Land & Bldg. Co., Ltd.	1889	\$300,000	6,000	\$50	\$30	none	\$653	31-12-07	\$1½ for 1907	6½	\$26½ sales
Shanghai Land Investment Co., Ltd.	1888	Tls. 3,900,000	78,000	Tls. 50	Tls. 50	{ Tls. 1,523,045 } { e Tls. 170,000 }	Tls. 107,547	31-12-07	{ Final of Tls. 3 & bonus of Tls. 2 making in all Tls. 8 for 07. }	6½	Tls. 123 sales
Tientsin Land Investment Co., Ltd.	1902	Tls. 772,600	7,726	Tls. 100	Tls. 100	i Tls. 75,185	Tls. 811	31-12-07	{ Final of Tls. 3 making Tls. 6 for 1907 }	6½	Tls. 90.
West Point Bldg. Co., Ltd.	1889	\$625,000	12,500	\$50	\$50	none	\$1,541	31-12-07	{ Final of \$2.10 making in all \$4.10 for year endg. 31-12-07 }	8½	\$48
COTTON MILLS.											
Ewo Cotton Spinning & Weaving Co., Ltd.	1895	Tls. 1,000,000	5) 20,000	Tls. 50	Tls. 50	{ Tls. 150,000 } { Tls. 45,939 }	Tls. 8,807	31-10-07	Tls. 2½ for year ended 31-10-07	4½	Tls. 56 buyers
Hongkong Cotton Spinning, Weaving & Dyeing Co., Ltd.	1901	\$1,250,000	125,000	\$10	\$10	e \$60,000	\$14,269	31-7-07	50 cents for year ending 31-7-07	4½	\$11 sales
International Cotton Manufacturing Co., Ltd.	1895	Tls. 750,000	6) 10,000	Tls. 75	Tls. 75	Tls. 150,000	Tls. 85,519	30-9-07	Tls. 6 for year end. 30-9-06 (8%)	---	Tls. 62½ sales
Laou-kung-mow Cotton Spinning & Weaving Co., Ltd.	1895	Tls. 800,000	8,000	Tls. 100	Tls. 100	none	Tls. 6,308	31-12-07	Tls. 8 for 1906	---	Tls. 82½ sales
Soy Chee Cotton Spinning Co., Ltd.	1895	Tls. 1,000,000	2,000	Tls. 500	Tls. 500	l Tls. 28,257	Tls. 50,663	31-12-06	Tls. 50 for 1906	---	Tls. 245 sellers
MISCELLANEOUS.											
Bell's Asbestos Eastern Agency, Ltd.	1895	£5,377.10s	11) 8,604	12-6	12/6	£1,299	£638	31-12-06	1s. 3d. for 1906	9	\$7½
China-Borneo Co., Ltd.	1903	\$720,000	8) 60,000	\$12	\$12	\$25,000	Nil.	31-12-07	\$1.20 for 1907	11	\$10½
China Light & Power Co., Ltd.	1901	\$550,000	{ 50,000 } { 17) 50,000 }	\$10	\$10	none	\$25,000	28-2-07	60 cents for year ending 28-2-06	---	\$6½
Do. do. Special Shares	1907			\$1	\$1	none	\$25,000	28-2-07	60 cents for year ending 28-2-06	---	\$6½
China Provident Loan & Mortgage Co., Ltd.	1898	a \$1,250,000	7) 125,000	\$10	\$10	\$120,000	\$3,593	31-12-07	80 cents for 1907	8½	\$9½
Dairy Farm Co., Ltd.	1896	\$187,500	25,000	\$7½	\$6	{ \$60,000 } { \$5,000 }	\$2,974	31-7-07	\$1.30 for year ending 31-7-07	6½	\$20
Green Island Cement Co., Ltd.	1889	\$4,000,000	400,000	\$10	\$10	\$12,000	\$5,078	31-12-07	{ Final of 75 cents making in all \$1½ for 1907 }	11½	\$10½
H. Price & Co. Ltd.	1907	\$120,000	19) 15,000	\$10	\$10	\$5,000	\$251	31-12-07	75 cts. for 9 months endg. 31-12-07	8	\$12 buyers
Hall & Holtz, Ltd.	---	\$420,000	14) 21,000	\$20	\$20	\$186,000	\$8,957	28-2-08	\$2 for year ending 28-2-08	10½	\$19½ sales
Hongkong Electric Co., Ltd.	1889	\$600,000	60,000	\$10	\$10	none	\$9,321	29-2-08	{ \$1.00 and bonus 20 cents for year ending 29-2-08 }	7½	\$16
Hongkong Ice Co., Ltd.	1881	\$125,000	5,000	\$25	\$25	k \$120,000	\$4,378	31-12-07	{ Final of \$15 making in all \$19 for 1907 }	8½	\$225 buyers
Hongkong Rope Manufacturing Co., Ltd.	1883	\$600,000	\$60,000	\$10	\$10	none	\$8,191	31-12-07	{ Final of \$1.20 making in all \$2 for 1907 }	8	\$25 buyers
Maatschappij tot Mijn-, Bosch- en Landbouwexploitatie in Langkat	1902	Gs. 2,500,000	25,000	Glds. 100	Glds. 100	{ Tls. 547,500 } { i Tls. 27,603 }	Tls. 17,127	31-10-06	Interim of Tls. 10 for second quarter	6½	Tls. 522½ sales
Peak Tramways Co., Ltd.	1907	\$750,000	{ 25,000 } { 50,000 }	\$10	\$10	\$5,000	\$ 7,471	30-4-08	{ 80 cents on fully paid shares & 6 cents on \$1 paid shares for year ending 30-4-08 }	{ 6 } { 4 }	\$14 \$2
Philippine Co., Ltd.	1904	\$750,000	75,000	\$10	\$10	none	none	31-12-07	None	---	\$8
Shanghai Gas Co., Ltd.	1903	Tls. 800,000	24,000	Tls. 50	Tls. 50	d Tls. 100,000	Tls. 6,603	31-12-07	{ Final of Tls. 4 making Tls. 7½ for 1907 }	6½	Tls. 113 sales
Shanghai-Sumatra Tobacco Co., Ltd.	1902	Tls. 600,000	9) 30,000	Tls. 20	Tls. 20	{ Tls. 24,820 } { w Tls. 75,000 }	Tls. 8,493	31-10-07	{ Final of Tls. 9 making in all Tls. 14 for 1907 }	16	Tls. 88 sellers
Shanghai Waterworks Co., Ltd.	1881	£327,000	16,350	£20	£20	Tls. 190,000	Tls. 58,332	31-12-07	{ Final of 37½ making in all 52½ for 1907 }	---	Tls. 385 sales
South China Morning Post, Ltd.	1903	\$150,000	6,000	\$25	\$25	none	Dr. \$90,237	31-8-07	None	---	\$23 buyers
Steam Laundry Co., Ltd.	1902	\$100,000	20,000	\$5	\$5	none	\$478	31-5-07	40 cents for year ending 30-5-07	6½	\$6
Tientsin Waterworks Co., Ltd.	1901	Tls. 200,000	2,000	Tls. 100	Tls. 100	{ Tls. 15,259 } { e Tls. 4,000 }	Tls. 201	30-4-07	Tls. 6½ for year ending 30-4-07	---	Tls. 97 sellers
Union Waterboat Co., Ltd.	1905	\$500,000	15) 50,000	\$10	\$10	none	\$111	31-12-07	50 cents for 1907	4½	\$11
United Asbestos Oriental Agency, Ltd.	1896	\$100,000	10,000	\$10	\$4	\$35,000	\$1,360	31-5-07	{ 80 cts. on 9,900 ord shares & \$19.80 on 100 founders' shares for year ending 31-5-07 }	6½	\$13
Watson (A. S.) & Co., Ltd.	1886	\$900,000	90,000	\$10	\$10	{ \$300,090 } { e \$25,000 }	\$6,438	31-12-07	{ Final of 3% = 30 cents making in all 60 cent. for year ending 31-12-07 }	6	\$10 sellers
Weismann Limited	1904	\$17,500	175	\$100	\$100	\$6,700	\$13	31-7-07	10 per cent. for year endg. 31-7-07	---	\$150 buyers
William Powell, Ltd.	1901	\$150,000	15,000	\$10	\$10	none	\$41	30-6-07	{ Final of 30 cents making 80 cents for year ending June 30th 1906 }	---	\$5 buyers

LOANS AND DEBENTURES.	AGENTS FOR THE LOAN.	AMOUNT OF LOAN.	PAR VALUE	OUTSTANDING BONDS.	WHEN PAYABLE.	CLOSING QUOTATIONS.
China Government, 7 per cent. Silver Loan 1886 E.	{ Hongkong & Shanghai Banking Corporation. }	Tls. 767,200	Tls. 250	1914	Mar. 31st and Sept. 30th each year until Mar. 31st, 1917	par.
Hongkong Hotel Company, Ltd., 6 per cent. Mortgage Debentures of 1899 †.		\$500,000	\$500	\$ all	Half yearly, June 30th and December 31st	par.
Shanghai & Hongkew Wharf Company, Ltd., 6 per cent. Debentures of 1902		Tls. 543,900	Tls. 100	-----	Half yearly, June 30th and December 31st	Tls. 102
Astor House Hotel Company, Ltd., 8 per cent. Debentures of 1903		Tls. 500,000	Tls. 100	-----	Half yearly, January 1st and July 1st	101
Chinese Engineering & Mining Co., Ltd., 6 per cent. Debentures of 1903 †	-----	£500,000	£	£431,960	Half yearly, June 30th and December 31st	par.
International Cotton Manufacturing Co., Ltd. 7% Debentures of 1901	Russo Chinese Bank	Tls. 500,000	Tls. 100		Half yearly, March 31st and Sept. 30th	Tls. 97½.
China Light and Power Co., Ltd. 6% Debentures of 1907 ***	-----	\$500,000	\$100	-----	Half yearly, June 30th and December 31st.	par.

a Authorized capital \$2,000,000.
b Building Reserve Account.
c Capital Reserve Fund.
d Depreciation Fund.
e Equalization of Dividend Fund.
f Exchange and Investment Fluctuation Account.
g Gold Reserve Fund
h Exchange Reserve Account.
i Insurance Fund.
j Reinsurance Fund.
k Contingencies Account.
l Legal Reserve Fund.
m Authorized Capital
n Sinking Fund.

o Raw Sugar Reserve Account.
p Premium on New Issue.
q Boiler Repairs and Renewals Account
r Repairs and Renewals Account.
s Silver Reserve Fund.
t Depreciation and Repairs Account
u Underwriting Suspense Account.
v Special account
w Special Works Fund.
x Extra Reserve Fund.
y 72,560 owned by the Company.
z 7,200 shares unissued.
1 4,000 shares unissued.
2 First issue of 60,000 of which 10,411 unallotted.

3 5,000 shares unissued.
4 4,480 shares unissued.
5 5,000 shares unallotted.
6 1,616 shares unallotted.
7 75,000 shares unissued.
8 14,000 shares unissued.
9 17,000 shares unissued.
10 40,453 shares actually issued.
11 7,688 shares actually issued.
12 4,200 shares unissued.
13 500 shares unissued.
14 399 shares unissued.
15 22,277 shares unissued.
16 10,000 shares unissued.
17 Special shares are entitled to half of the profits.

18 Capital contributed by Chinese Government, Kuping Tls. 5,000,000.
19 12,000 issued only.
* Based on last year's dividend.
** Based on present dividend.
† Only Tls. 134,000 taken up.
‡ 216 held by the Company.
§ In certificates of £20 and £100.
¶ Redeemable in 10 years, or at option of Company, the Company giving 6 months notice.
† Redeemable at par at rate of £10,000 per annum from 31st December 1903 to 31st December 1952.
*** Redeemable at par on 30th June, 1915.
Dr. Deficit.

ADDITIONAL SHANGHAI SHARE QUOTATIONS

STOCK	CLOSING QUOTATIONS	HIGHEST AND LOWEST PRICES DURING THE WEEK	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	LAST DIVIDEND	WHEN PAID
Oriental Consolidated Mining Co., Ltd.	27s. 6d.		G. \$5,000,000	500,000	G. \$10	G. \$10	none	Interim of Gold cents 50 for year ended 30th June 1907.	May 1908
Kiang pei-ting Coal & Iron Mine Co., Ltd.	Tls. 50		Tls. 500,000	5,000	Tls. 100	Tls. 50	—	First year.	Nov. 1, 1906
Vulcan Iron Works, Limited.	Tls. 400		Tls. 500,000	1,000	Tls. 500	Tls. 500	—	Tls. 50 for year ended 31.8.06.	Nov. 1, 1906
Yangtze Wharf & Godown Co., Limited.	Tls. 125 nominal		Tls. 250,000	2,500	Tls. 100	Tls. 100	Tls. 50,000	Tls. 18 for 1907.	April 16, 1908
Wei-hai-wei Land & Building Co., Limited.	Tls. 10 nominal		Tls. 91,850	3,674	Tls. 25	Tls. 25	—	—	—
Union Estate & Investment Co., Limited.	Y. 105 sales		Y. 1,000,000	10,000	Y. 100	Y. 100	—	First year.	Dec. 31, 1907
Grand Hotel, Limited.	Y. 100 sellers		Y. 500,000	5,000	Y. 100	Y. 100	—	Interim Y. 5 for 1½ year.	May 29, 1908
Hotel des Colonies Company, Limited.	Tls. 9 sellers		Tls. 112,500	9,000	Tls. 12½	Tls. 12½	Tls. 29,783	6% for 1907.	May 22, 1908
Kalee, Limited.	\$100 nominal		\$100,000	4,000	\$100	\$100	—	\$5 for 1907.	Mar. 12, 1908
Anglo-German Brewing Co., Limited.	\$8½ buyers		\$1,000,000	4,000	\$100	\$100	none	\$7 for 1907.	May 29, 1907
Butler Tile Works, Limited.	Tls. 50 nominal		Tls. 60,000	1,200	Tls. 50	Tls. 50	—	Tls. 3 for year ending 31.3.07.	Mar. 12, 1908
Major Bros., Limited.	Tls. 40 sellers		Tls. 300,000	6,000	Tls. 50	Tls. 50	—	—	May 29, 1907
Oriental Ice Company, Limited.	Tls. 50		Tls. 1,000,000	2,600	Tls. 50	Tls. 50	—	First year.	—
Scharffs Oil and Bone Mills, Ltd.	Tls. 50		Tls. 200,000	4,000	Tls. 50	Tls. 50	—	First year.	—
Shanghai Ice Company, Limited.	Tls. 13 sales		Tls. 200,000	8,000	Tls. 25	Tls. 25	—	3% for 1907.	Mar. 14, 1908
Shanghai Oil Co., Limited.	Tls. 25		Tls. 175,000	7,000	Tls. 25	Tls. 25	—	First year.	—
Campbell, Moore & Co., Limited.	\$10 buyers		\$12,000	1,200	\$10	\$10	\$9,000	\$3 for 1905.	Apr. 2, 1906
Dunning & Company, Limited.	\$50 sellers		\$100,000	2,000	\$50	\$50	—	\$5 year ending 28.2.08.	Apr. 15, 1908
J. Llewellyn & Co., Limited.	\$50 buyers		\$72,000	1,200	\$60	\$60	—	\$6 for 1907.	May 16, 1908
Lane, Crawford & Company.	\$137½ sales	137½	\$250,000	2,500	\$100	\$100	—	Final of 7% making 14% for 1907.	May 25, 1908
Mondon (E. L.) Limited.	Tls. 6 buyers		Tls. 225,000	9,000	Tls. 25	Tls. 25	none	—	—
S. Moutrie & Company, Limited.	\$48 sellers		\$250,000	5,000	\$50	\$50	—	\$4 for year ended March 31, 1908.	June 18, 1908
Weeks & Company, Limited.	\$22 buyers		\$400,000	20,000	\$20	\$20	\$25,000	10% for year ended 28.2.08.	Dec. 11, 1907
Dominion Rubber Co., Limited.	Tls. 4		Tls. 225,000	22,500	Tls. 10	Tls. 4	—	First year.	—
Kalumpang Rubber Co., Ltd.	Tls. 42 sellers		Tls. 700,000	14,000	Tls. 50	Tls. 50	** Tls. 11,844.48	—	—
Senawang Rubber Estates Company, Limited.	Tls. 100		Tls. 250,000	2,500	Tls. 100	Tls. 100	—	—	—
Senawang Rubber Estates Company, New.	Tls. 75		Tls. 250,000	2,500	Tel. 100	Tls. 75	—	—	—
Tebong Rubber and Tapioca Estate, Limited.	20s.		£76,000	76,000	£1	£1	—	—	—
Eastern Fibre Co., Limited.	Tls. 10 nominal		Tls. 300,000	30,000	Tls. 10	Tls. 10	—	—	—
Shanghai Mercury, Limited.	Tls. 50 buyers		Tls. 105,500	2,100	Tls. 50	Tls. 50	—	4% for half year ended 31 Oct. 1907.	Dec. 17, 1907
Shanghai Mutual Telephone Co., Limited.	Tls. 57 buyers	57½	Tls. 675,000	13,500	Tls. 50	Tls. 50	—	Tls. 4 for 1906.	—
China Export Import & Lumber Company, Limited.	Tls. 92½ nominal		Tls. 350,000	500	Tls. 100	Tls. 50	—	10 p. c. for year ending 29.2.08.	May 1, 1908
China Printing Co., Limited.	Tls. 50		Tls. 750,000	1,500	Tls. 50	Tls. 50	—	80 cents for 1907.	Jan. 30, 1908
Dallas Horse Repository Co., Ltd.	Tls. 25 nominal		Tls. 250,000	5,000	Tls. 50	Tls. 50	—	—	—
Hirano Mineral Water Co., Ltd.	Y. 15 sales		Y. 125,000	5,000	Y. 25	Y. 25	—	{ 10% = yen 2½ for year ending 30th Sept. 07.	Nov. 21, 1907
E. E. Porter & Co., Limited.	\$50		\$100,000	2,000	\$50	\$50	—	\$6 for 1907.	Apr. 22, 1908
Shanghai Electric & Asbestos Company, Limited.	\$23 sales		\$125,000	5,000	\$25	\$25	—	Interim of 4% for 1907.	Jan. 15, 1908
Shanghai Electric Construction Company, Limited.	£11 buyers	£11	£300,000	30,000	£10	£10	—	First year.	—

DEBENTURES

LOANS	PRICE—PLUS ACCRUED INTEREST	AMOUNT OF LOAN	OUTSTANDING	NOMINAL VALUE	RATE OF INTEREST	WHEN PAYABLE
Shanghai Municipal Debentures	1892 Tls. 90	Tls. 50,000	Tls. 45,400	Tls. 100	5 %	June & Dec.
do	1893 " 95	" 125,000	" 47,300	" 100	5½ "	Do
do	1894 " 103	" 105,000	" 60,000	" 100	6 "	Do
do	1895 " 90	" 115,000	" 110,900	" 100	5 "	Do
do	1896 " 90	" 140,000	" 135,700	" 100	5 "	Do
do	1897 " 90	" 268,800	" 268,400	" 100	5 "	Do
do	1898 " 113	" 300,000	" 60,000	" 100	6 "	Do
do	1900 " 95	" 83,900	" 31,700	" 100	5½ "	Do
do	1901 " 103	" 250,000	" 200,000	" 100	6 "	Do
do	1902 " 103	" 150,000	" 150,000	" 100	6 "	Do
do	1903 " 103	" 40,500	" 49,500	" 100	6 "	Do
do	1904 " 103	" 214,500	" 214,500	" 100	6 "	Do
do	1905 " 103	" 320,000	" 320,000	" 100	6 "	Do
Chinese Imperial Government Loan	1886 E " 250	" 767,200	" 354,400	" 250	7 "	Mar. & Sept.
Shanghai Land Investment Co., Debentures	1890 " 102	" 250,000	" 250,000	" 100	6 "	May & Nov.
do	1892 " 95	" 250,000	" 250,000	" 100	5½ "	June & Dec.
do	1894 " 102	" 250,000	" 250,000	" 100	6 "	Mar. & Sept.
do	1896 " 90	" 250,000	" 250,000	" 100	5 "	June & Dec.
do	1900 " 102	" 250,000	" 250,000	" 100	6 "	April & Oct.
do	1901 " 102	" 250,000	" 250,000	" 100	6 "	June & Dec.
do	1901 " 95	" 100,000	" 100,000	" 100	5 "	May & Nov.
do	1902 " 102	" 400,000	" 400,000	" 100	6 "	June & Dec.
do	1905 " 102	" 250,000	" 250,000	" 100	6 "	Do
Shanghai Waterworks Co., Debentures	1894 " 102	" 100,000	" 100,000	" 100	6 "	Mar. & Sept.
do	1896 " 90	" 100,000	" 100,000	" 100	5 "	June & Dec.
do	1899 " 102	" 50,000	" 50,000	" 100	6 "	Do
do	1900 " 102	" 100,000	" 100,000	" 100	6 "	Mar. & Sept.
do	1902 " 102	" 100,000	" 100,000	" 100	6 "	Do
do	1903 " 102	" 100,000	" 100,000	" 100	6 "	June & Dec.
Perak Sugar Cultivation Co., Debentures	1902 " 100½	" 200,000	" 200,000	" 100	7 "	April & Oct.
Shanghai Gas Co., Debentures	1897 " 90	" 100,000	" 100,000	" 100	5 "	Do
do	1899 " 102	" 1,000,000	" 100,000	" 100	6 "	May & Nov.
do	1900 " 102	" 2,000,000	" 200,000	" 100	6 "	June & Dec.
Shanghai and Hongkew Wharf Co., Debentures	1902 " 102	" 799,800	" 799,800	" 100	6 "	Do
Astor House Co., Debentures	" 101	" 500,000	" 500,000	" 100	7 "	Do
British Municipal Council, Hankow	1901 Sh. " 102½	H'kow Tls 100,000	H'kow Tls 100,000	" 100	7 "	June & Dec.
Shanghai Club Debentures	1907 " 96	Tls. 170,000	Tls. 170,000	" 100	6 "	Do
Country Club Debentures	1907 " 97	" 139,000	" 139,000	" 100	6 "	Do
do	1907 " 97	" 92,000	" 92,000	" 100	6 "	Do
Lane Crawford & Co., Debentures	1907 " 103	" 110,000	" 110,000	" 100	7 "	Mar. & Sept.
Anglo-French Land Debentures	1908 " 100	" 250,000	" 250,000	" 100	6 "	June & Dec.

SINGAPORE SHARE QUOTATIONS

(COURTESY MESSRS. FRASER & CO., BROKERS, SINGAPORE, JUNE, 1908)

Date of Formation	Capital	Capital paid up	No. of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers	Sellers	Closing Quotation
MINING											
1903	\$300,000	300,000	30,000	10	10	-----	10% for year ending 31-3-98	Belat Tin Mining Co., Ltd.	5.00	5.50	5.00
1907	\$300,000	225,000	22,500 ^y	10	10	-----	20% for year ending 30-4-07	Bruang Ltd.	-----	5.00	5.00
1901	\$600,000	600,000	60,000	10	10	-----	-----	Bruseh Hydraulic Tin Mining Co., Ltd.	11.50	13.50	11.50
1903	\$400,000	350,000	350,000 ^a	1	1	-----	-----	Duff Development Co., Ltd.	2.75	2.90	2.90
1907	\$400,000	375,000	37,500 ^b	10	10	-----	-----	Kanaboi, Ltd.	-----	4.00	4.00
1901	\$60,000	60,000	60,000	1	1	-----	2/- during 1907	Kinta Tin Mines, Ltd.	9.50	10.25	10.25
1906	\$100,000	100,000	100,000	1	1	-----	-----	Kledang Tin Mining Co., Ltd.	-----	-----	3.75
1905	\$150,000	99,000	9,900 ^c	10	10	10,000	35% for year ending 31-12-07	Kuantan Tin Mining Co., Ltd.	-----	8.50	8.50
1906	\$120,000	120,000	120,000	1	1	-----	-----	Lahat Mines Ltd.	6.00	6.25	6.25
1906	\$30,000	30,000	30,000	1	1	-----	-----	Malaya and Siam Corporation, Ltd.	-----	12/6	12/6
1906	\$450,000	337,500	45,000	10	7.50	-----	-----	Malacca Tin Dredging Co., Ltd.	-----	-----	7.50
1906	\$250,000	179,500	600,000 ^h	5/-	5/-	-----	-----	Pahang Consolidated Co., Ltd.	25/3	25/6	25/6
1907	\$100,000	80,000	80,000 ^j	1	1	-----	-----	Pengkalan, Ltd.	-----	5.00	5.00
1904	\$120,000	100,000	100,000 ^d	1	1	6,000	45% for year ending 30-6-07	Pusing Lama Tin Mines, Ltd.	3.50	4.00	3.50
1907	\$450,000	300,000	30,000 ^h	10	10	-----	1/- interim during 1907	Rahman Hydraulic Tin Mines, Ltd.	-----	9.25	9.25
1905	\$27,000	21,750	21,750 ^e	1	1	-----	1/- paid January 1901	Rambutan, Ltd.	6.00	7.00	7.00
1892	\$200,000	191,250	150,000	1	18/10	4,873	1/-	Raub Aust. Gold Mining Co., Ltd. Fully pd.	4.90	5.00	5.00
1905	\$40,000	40,000	40,000	1	1	-----	-----	Redhills Tin Mining Co., Ltd.	4.90	5.00	5.00
1898	Gs 2,500,000	2,500,000	25,000	100	100	-----	71% for year ending 31-12-07	Redjang Lebong Mining Co., Ltd.	0.75	1.00	1.00
1900	\$110,000	110,000	22,000	5	5	-----	10% for 1907	Royal Johore Tin Mining Co., Ltd.	0.80	0.90	0.90
1907	\$500,000	500,000	50,000	10	10	-----	-----	Salak South, Ltd.	6.00	-----	6.25
1907	\$80,000	80,000	80,000	1	1	-----	7 1/2% interim for 1908	Sempam Tin Mines, Ltd.	-----	4.00	4.00
1906	\$850,000	850,000	85,000	10	10	25,000	5% for 1/2 year ending 30-6-06	Serendah Hydraulic Tin Mining Co., Ltd.	6.00	6.50	6.50
1899	\$230,000	230,000	23,000	10	10	-----	-----	Sipiau Tin Co., Ltd.	-----	4.00	4.00
1907	\$90,000	70,000	70,000 ^z	1	1	-----	5/- during 1907	Tekka, Limited	7.25	8.00	8.00
1902	\$160,000	149,185	149,185 ^f	1	1	-----	-----	Tronoh Mines, Ltd.	8.25	8.50	8.50
RUBBER											
1905	\$150,000	124,125	46,500	1	1	-----	20% for year ending 31-12-07	Anglo-Malay Rub. Co., Ltd. Fully paid	3.7.6	3.15.0	3.15.0
1905	\$200,000	105,000	10,500 ^g	10	10	-----	12 1/2% interim for 1907	Balgownie Rub. Estate Ltd.	3.5.0	3.12.6	3.12.6
1904	\$30,000	22,750	22,750 ⁱ	1	1	-----	-----	Batu Caves Rub. Co., Ltd.	-----	16.00	16.00
1903	\$70,000	66,700	66,700 ^j	1	1	-----	10% interim for 1907	Bukit Rajah Rubber Co., Ltd.	4.10.0	5.0.0	4.10.0
1906	\$150,000	125,000	12,500 ^k	10	10	-----	-----	Castewood Rubber Co., Ltd.	-----	9.00	9.00
1904	\$16,000	16,000	10,000	1	1	-----	37 1/2% for year ending 31-3-08	Cicely Rubber Estates Co., Ltd.	4.5.0	4.17.6	4.17.6
1905	\$75,000	55,000	55,000 ^l	1	1	-----	42 1/2% for year ending 31-3-08	Consolidated Malay Rub. Estates, Ltd.	-----	2.5.0	2.5.0
1906	\$310,000	259,530	181,454 ^m	1	1	8,784	12 1/2% for year ending 31-12-07	Highlands & Lowds. Para Rub. Co., Ltd.	-----	1.17.6	1.17.6
1906	\$180,000	180,000	180,000	1	1	-----	3% interim for 1907	Kuala Lumpur Rubber Co., Ltd.	1.0.0	1.5.0	1.5.0
1907	\$320,000	201,500	184,000 ^d	1	1	-----	-----	Langen Rub. and Coconut Co., Ltd.	10/6	11/-	11/-
1906	Gs 175,000	175,000	540	250	250	-----	-----	Langen Rub. and Coconut Co., Ltd.	-----	250	250
1906	\$250,000	225,000	22,500 ⁿ	10	10	-----	-----	Ledbury Rubber Co., Ltd.	7.0	8.00	7.00
1895	\$100,000	73,000	630,000 ^e	2/-	2/-	-----	20% for year ending 31-12-07	Linggi Plantations Ltd., Ordinary	8/6	9/-	9/-
1906	\$300,000	283,125	115,000	1	1	-----	7 1/2% for year ending 31-12-07	Malacca Rubber Plants, Ltd. 7 1/2% Pref.	-----	19/6	19/6
1903	\$30,000	20,000	20,000 ^o	1	1	-----	-----	Malacca Rubber Plants, Ltd. 7 1/2% Pref.	-----	9/-	9/-
1906	\$250,000	225,000	22,500 ^b	10	10	-----	35% for year ending 31-12-07	Pataling Rubber Estates Synd. Ltd.	-----	9.00	9.00
1904	\$20,000	10,035	2,588 ^a	1	1	-----	-----	Ragalla Rubber Co., Ltd.	-----	2.10.0	2.10.0
1904	\$100,000	99,000	990 ^k	100	100	-----	15% for year ending 31-1-08	Saggia Rubber Company Limited	-----	-----	-----
1898	\$30,000	30,000	300,000	2/-	2/-	-----	41% for year ending 31-12-07	Sandycroft Rubber Co., Ltd.	-----	250.00	250.00
1903	\$250,000	250,000	2,500	100	100	-----	-----	Selangor Rubber Co., Ltd.	-----	92.50	92.50
1905	\$100,000	100,000	10,000	10	10	-----	7 1/2% for year ending 30-6-07	Singapore & Johore Rub. Co., Ltd.	-----	10.00	10.00
1906	\$110,000	100,000	100,000 ^t	1	1	-----	25% interim for 1907	Sione Rubber Co., Ltd.	-----	2.5.0	2.5.0
1904	\$50,000	41,920	50,000 ^p	1	1	-----	-----	Sungei Kapar Rubber Co., Ltd.	-----	1.10.0	1.10.0
1904	\$60,000	50,000	500,000 ^q	2/-	2/-	-----	-----	Sungei Way (Selangor) Rub. Co., Ltd.	11/6	12/6	12/6
GENERAL											
1894	\$5,377.10.0	4,805	7,688 ^c	12/6	12/6	1,300	10% for year ending 31-12-6	Bells Asbestos Eastern Agency, Ltd.	-----	-----	5.50
1898	\$225,000	225,000	4,500	50	50	132,500	15% & 2 1/2% bon. for yr. end. 31-12-07	Fraser & Neave, Ltd.	-----	132.50	132.50
1865	\$15,000,000	15,000,000	120,000	125	125	15,000,000 ^u	£2-0-0 on old and £1 10s 0d on new shares for half year ending 31-12-07	Hongkong & Shanghai Bank'g Corp't'n	-----	-----	78 10.0
1905	\$2,400,000	2,400,000	18,000	100	-----	75,000	7 1/2% for year ending 31-10-07	Howarth Erskine, Ltd.	-----	135.00	135.00
1896	\$1,000,000	1,000,000	6,000	100	100	600,000	7% for year ending 31-10-07	Katz Brothers, Ltd. Deferred	-----	120.00	120.00
1901	\$34,000	34,000	4,000	100	100	-----	10% for year ending 31-12-07	Katz Brothers, Ltd. Deferred	-----	-----	130.00
1899	\$875,000	875,000	3,400	10	10	-----	8% Cum. Pref.	Maynard & Co., Ltd.	-----	19.50	19.50
1903	\$600,000	240,000	24,000 ^r	10	10	-----	20% for year ending 31-10-07	Riley, Hargreaves & Co., Ltd.	85.00	90.00	90.00
1891	\$30,000	30,000	600	50	50	20,000	5% for year ending 31/12/07	Riley, Hargreaves & Co., Ltd.	-----	107.50	107.50
1903	\$400,000	400,000	400,000	1	1	-----	7% for year ending 31/12/07	Singapore Cold Storage Co., Ltd.	-----	6.00	6.00
1904	\$160,000	112,000	1,120 ^s	100	100	11,200	10% for year ending 31-7-07	Singapore Dispensary Ltd.	-----	42.50	42.50
1884	\$200,000	200,000	2,000	100	100	35,000	5% for year ending 30/6/07	Singapore Electric Tramways, Co., Ltd.	-----	5/-	5/-
1890	\$500,000	500,000	4,956 ^s	100	100	400,000	10% during 1907	Straits Engineering Syndicate Ltd.	-----	50.00	50.00
1904	\$40,000	\$35,350	2,535 ^s	10	10	458,925 ^w	10% for year ending 31-12-07	Straits Ice Co., Ltd.	-----	-----	130.00
1887	\$3,000,000	3,000,000	300,000	10	10	1,150,000	10% & 5% bon. for 1/2 yr. end. 30-9-07	Straits Steam Ship Co., Ltd.	190.00	200.00	190.00
DEBENTURES											
a	50,000 unissued		n	2,500 unissued.		a*	5,000 unissued.	Howarth Erskine, Ltd. 6%	par.	3%	3% prem.
b	2,500		o	10,000		b*	2,500	Riley, Hargreaves & Co., Ltd. 6%	-----	2%	2% prem.
c	5,100		p	8,080		c*	916	Singapore Electric Tramways, Co., Ltd. 5%	-----	-----	nominal
d	20,000		q	100,000		d*	66,000	Singapore Municipal 6%	-----	-----	20% prem.
e	5,250		r	36,000		e*	270,000	" " 5%	-----	-----	3% prem.
f	10,815		s	465		f*	480	" " 4 1/2%	-----	5%	5% prem.
h	100,000	Ord. Pref.	t	Special Gold Reserve Fund		g*	9,500	" " 4%	-----	10%	10% dis. nt
i	45,500		u	Silver Reserve Fund.		h*	15,000	Straits Engineering Synd. Ltd. 6%	par.	-----	par.
j	7,250		v	Insurance Fund.		i*	44	Tanjong Pagar Dock Board 5%	par.	-----	par.
k	3,300		w	Sundry Reserves.		j*	20,000				
l	2,500		x	Sundry Reserves.		k*	10				
m	20,000		y	7,500 unissued.		l*	10,000				
	5,000 to be issued to employees		z	20,000							

YOKOHAMA SHARE QUOTATIONS

COURTESY A. C. HUTTON POTTS, SHARE AND GENERAL BROKER, YOKOHAMA, JUNE, 1908

STOCKS	CAPITAL.	NO. OF SHARES	ISSUE VALUE	AMOUNT PAID UP	RESERVE FUND	AT WORKING ACCOUNT OR CARRIED FORWARD	DATE	LAST DIVIDEND	FOR TERM	CLOSING QUOTATION
Brett & Co., Ltd.	-Y- 28,000	2800	-Y- 10	-Y- 10			31-12-07	10%	for 1 year	10 Sellers.
Club Hotel, Ltd.	185,000	1850	100	100	3,000	-Y- 768.96	31-3-08	7%	for 1 year	70 Sellers.
Grand Hotel, Ltd.	500,000	5000	100	100	10,000	-Y- 8,762.67	31-12-07	5%	for 1 year	100 Nominal.
Helm Bros., Ltd.	186,000	3720	50	50	25,000	-Y- 1,682.93	31-12-07	20%	for 1 year	80 Sellers.
Langfeldt & Co., Ltd.	150,000	1500	100	100		Dr. 14,115.95	31-12-07		for 1 year	45 Sales.
C. Nickel & Co., Ltd.	500,000	20000	25	25		1,729.20	31-10-07	20%	for 1 year	42 Sellers.
Yokohama Engine and Iron Works.	500,000	10000	50	50	50,000	-Y- 12,477.04	31-5-07	10%	for 1 year	80 Sellers.
Oriental Hotel, Ltd., Ordinary		3000	50	50			31-8-06	15%	for 1 year	50 Nominal.
Oriental Hotel Ltd., Preference	250,000	2000	50	50	62,285.42			8%	for 1 year	50 Nominal.
The Union Estate and Investment Co., Ltd.	1,000,000	10000	100	100	3,259.65	1,774.45	30-9-07	7%	9 mos.	100 Nominal.

† 285,000 unissued.

† 475,000 unissued.

*-Y- 390,000 issued.

110,000 unissued.

DEBENTURE LOANS	AMOUNT OF LOAN.	FACE VALUE OF DEBENTURES.	RATE OF INTEREST.	INTEREST PAYABLE.	CLOSING QUOTATION.
Brett & Company, Limited	11,500.00	100.00	7%	1 June and 1 Dec.	95 Sales.
Yokohama United Club	250,000.00	100.00	7%	30 June and 31 Dec.	100 Sales.
C. Nickel & Company, Limited	50,000.00	100.00	8%	1 May and 1 Nov.	110 Sellers.
Oriental Hotel, Limited	250,000.00	100.00	8%	1 April and 1 Oct.	100 Sellers.
Union Estate and Investment Co., Limited	250,000.00	100.00	6%	30 June and 31 Dec.	100 Sellers.

JAPANESE STOCKS.	FACE VALUE.	AMOUNT PAID UP.	LAST DIVIDEND	DIVIDEND PAYABLE.	CLOSING QUOTATION.
Bonds & Debentures.					
Exchequer Bonds 1st issue	-Y-100	-Y-100	5%	June and Dec.	-Y- 99.60
Exchequer Bonds 2nd issue	100	100	5%	March and Sept.	" 94.80
Exchequer Bonds 3rd issue	100	100	5%	March and Sept.	" 93.69
Consolidated Bonds (Seiri)	100	100	5%	June and Dec.	" 81.70
War Bonds (Gunji)	100	100	5%	June and Dec.	" 81.70
Imperial 5% Bonds	100	100	5%	March and Sept.	" 81.00
Special 5% Bonds (issued 1906)	100	100	5%	June and Dec.	" 82.00
Yokohama Water Works Bonds	100	100	6%	June and Dec.	" 94.50
Yokohama City Public Loan Bonds	100	100	6%	March and Sept.	" 93.80
Osaka City Harbour Construction Bonds	100	100	6%	June and Dec.	" 89.00
Osaka City Public Loan Bonds	100	100	6%	June and Dec.	" 93.00
Kawasaki Dock Yards Co.'s Debentures	100	100	7%	June and Dec.	" 95.00
Tokyo Race Associations	500	500	30%	June and Dec.	" 500.00
Railways & Electric Trams.					
Tokyo Railway Company Limited	50	50	8%	June and Dec.	" 56.90
Yokohama Electric Tramway Company, Limited	50	50	6%	July and Jan.	" 33.00
Keihin Electric Tramway Company, Limited	50	50	13%	June and Dec.	" 64.00
Southern Manchurian Railway Co., Ltd.	100	20	6%	June and Dec.	" 23.00
Hanshin Electric Tramway Co., Ltd.	50	50	12%	May and Nov.	" 89.50
Cotton Spinings.					
Kanegafuchi Cotton Spinning Company, Limited	50	50	22%	July and Jan.	" 81.10
Fuji Gassed-Yarn Company, Limited	50	50	25%	July and Jan.	" 78.95
Tokyo Cotton Spinning Company, Limited	50	50	18%	July and Jan.	" 39.70
Imperial Hemp Weaving Company, Limited	50	50	12%	July and Jan.	" 51.00
Nisshin Boseki Kabushiki Kaisha	50	12½			" 8.00
Sugar & Beer Cos.					
Dai-nippon Sugar Refinery Company, Limited	50	50	15%	May and Nov.	" 68.90
Ensuiko Sugar Refinery Company, Limited	50	12½	18%	June and Dec.	" 20.35
Dai-nippon Beer Company, Limited	50	50	15%	July and Jan.	" 80.80
Kirin Brewery Company, Limited	50	50	8%	July and Jan.	" 59.00
Docks & Steamships.					
Yokohama Dock Company, Limited	50	33	12%	June and Dec.	" 48.00
Uraga Dock Company, Limited	50	50	12½%	July and Jan.	" 12.00
Kawasaki Dockyard Company, Limited	50	50	12½%	Feb. and Aug.	" 57.00
Nippon Yusen Kaisha	50	50	12%	May and Nov.	" 82.05
Hokkaido Tanko S. S. Company, Limited	50	50	14%	July and Jan.	" 86.80
Miscellaneous.					
Tokyo Electric Light Company, Limited	50	50	10%	June and Dec.	" 66.50
Tokyo Gas Company, Limited	50	50	15%	July and Jan.	" 85.30
Yokohama Union Electric Light Company, Limited	50	50	15%	July and Jan.	" 68.00
Fuji Paper Mills	50	50	10%	June and Dec.	" 44.00
Otaru Timber Company, Limited	50	50	15%	March and Sept.	" 21.00
Hoden Petroleum Company, Limited	50	50	36%	April and Oct.	" 108.00
Tokyo Rope Manufacturing Company, Limited	50	50	20%	June and Dec.	" 90.00
Japan Horse Improvement Company, Limited	50	50	15%	March and Sept.	" 39.50
Tokyo Stock Exchange Company	50	50	11%	June and Dec.	" 106.90
Osaka Electric Light Company, Limited	50	50	15%	July and Jan.	" 99.00
Kobe Electric Light Company, Limited	50	50	14%	July and Jan.	" 69.00

BANGKOK QUOTATIONS

(COURTESY MESSRS. EDWARDS & CO., BANGKOK, SIAM.)

NAME.	BUYERS.	SELLERS.	QUOTATION.	ESTABLISHED.	CAPITAL.	NO. OF SHARES.	ISSUE VALUE.	AMOUNT PAID UP.	RESERVE FUND	LAST DIVIDEND	WHEN PAID OR PAYABLE.
Siam Electricity Co., Ltd.	Tcs. —	Tcs. 505	Tcs. 505	1901	£ 300,000	30,000	£ 10	£ 300,000	Tcs. 448,174.31	12% & 12½ T. bon.	Feb. 29, 1908
Paknam Railway Co., Ltd.	" 200	" —	" 210	1893	Tcs. 400,000	5,000	Tcs. 80	Tcs. 400,000	" 80,000	6% & 2 Tcl. bonus for ½ year ending	Dec. 31, 1906
Siam Tramway Co., Ltd.	" 160	" 168	" 168	1905	" 1,450,000	7250 Shares	" 100	" 1,450,000	—	2%	Mar. 31, 1907
Meklong Railway Co., Ltd.	" 124	" 127	" 129	July 12, 1907	" 2,230,000	22,300	" 100	" 2,230,000	17,316.22	2½%	Sept. 30, "
Bangkok Manufact. Co., Ltd.	" 145	" —	" 160	1898	" 400,000	4,000	" 100	" 400,000	—	None	Dec. 31, 1907
Howarth Erskine, Ltd.	" —	" —	" 235	1905	\$ 2,400,000	24,000	\$ 100	\$ 2,400,000	\$ 40,000	7½%	June 30, 1907
Bangkok Dock Co., Ltd.	" —	" —	" 305	1865	Tcs. 666,666	4,000	Tcs. 166½	Tcs. 666,666	Tcs. 270,000	12½% & 2½ Bonus	Dec. 31, 1907
Siam Steam Packet Co.	" —	" 100	" 100	1898	" 131,250	2,625	" 50	" 131,250	" 36,000	14%	Dec. 31, 1907
Siam Commercial Bank	" 1,350	" 1,450	" 1,450	1906	" 3,000,000	3,000	" 1,000	" 3,000,000	" 140,000	5%	Mar. 31, 1908
Menam Motor Boat Co.	" 130	" —	" 140	1905	" 200,000	2,000	" 100	" 125,000	—	5%	July 31, 1907
Jenderata Rubber Co.	" 65	" 70	" 70	1906	£ 40,000	4,000	£ 10	£ 3, per Share	—	None	—
Langsuan Tin Mine Co.	" —	3/	4/	1905	£ 170,000	170,000	£ 1	£ 60,000	—	—	—